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# Emissions Inventory System/Area Source (EIS/AS) Test Run Series Documentation

Research Triangle Inst.
Research Triangle Park, NC

Prepared for

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Oct 80

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This manual documents the EIS/AS test run series released by the Environmental Protection Agency. The test run series is divided into two major areas: basic test runs and ad hoc test runs. The basic test runs exercise each program in EIS/AS at least once and provide the user with a means of determining whether or not his installation of EIS/AS has been successful.

The ad hoc test runs further exercise the capabilites of the EIS/AS programs. The ad hoc test runs also provide the user with examples of how various combinations of EIS/AS programs may be used to generate certain reports or to accomplish special tasks. Any programs added to the original EIS/AS system are exercised by ad hoc test runs.

The EIS/AS User's Guide should be used as a reference in conjunction with this manual. Appendix A of this manual provides a cross-reference of tests, procedures, and programs.

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# Emissions Inventory System/ Area Source (EIS/AS) Test Run Series Documentation

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Office of Air, Noise, and Radiation
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October 1980

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# INTRODUCTION

The purpose of this manual is to document the EIS/AS test run series released by the Environmental Protection Agency, as part of the EIS/AS installation package. The test run series is divided into two major areas: basic test runs and ad hoc test runs. The basic test runs exercise each program in EIS/AS at least once and provide the user with a means of determining whether or not the installation of EIS/AS has been successful.

The ad hoc test runs further exercise the capabilities of the EIS/AS programs. The ad hoc test runs also provide the user with examples of how various combinations of EIS/AS programs may be used to generate certain reports or to accomplish special tasks. Any programs added to the original EIS/AS system are exercised by ad hoc test runs.

The EIS/AS User's Guide should be used as a reference in conjunction with this manual. Appendix A of this manual provides a cross-reference of test, procedures, and programs.

## EIS/AS Test 1

## Create and Print the Emission Factor File

In this test run, an initial EIS/AS emission factor file is created using the cataloged procedure ECEME10 which executes CSREFTR (EC0010), the emission factor file transaction sort program; and CEMEFAC (EC0020), the emission factor file edit-maintenance program. A detailed report of the emission factor file is printed by using the cataloged procedure ECRPE10 which executes CRPEFAC (EC0150), the emission factor file detailed report program.

CSREFTR (EC0010) sorts the emission factor file transactions (see Figure AST1-1 for the transaction formats) into the sequence required by CEMEFAC (EC0020). The fields of each transaction are sorted in the following order:

| Columns | Description | Sort Order |
|---|---|---|
| 1 - 2 | State Code | Ascending |
| 3 - 6 | County Code | Ascending |
| 7 - 11 | Geographic Suballocation Number | Ascending |
| 12 - 14 | Category Number | Ascending |
| 15 - 16 | Category Disaggregate Number | Ascending |
| 17 | Emission Factor Origin | Ascending |
| 18 | Source Type | Ascending |
| 19 - 23 | Pollutant ID | Ascending |
| 80 | Action Code | * |
| 79 | Card Type | Ascending |
| 24 - 28 | Emission Factor Date | Ascending |

A header record is generated by CSREFTR (EC0010) which appears as the first transaction but has no action code or card number. All emission factor file transactions must be sorted by CSREFTR (EC0010) before they can be used to create the emission factor file.

---

*Sort sequence is D (delete), A (add), C (change).

CEMEFAC (EC0020) edits emission factor file transactions and updates the EIS/AS emission factor file using those transactions which pass the edit criteria. The input emission factor file transactions can consist of three types: type 1, type 2, and type 3. Refer to Figure AST1-1 for the emission factor file transaction formats and to Figure AST1-2 for the emission factor file transaction load sheet.

A category record can be added to the emission factor file by processing a category-1 (type 1) add transaction or by processing both category-1 and a category-2 (type 2) add transaction for the desired category. Note that a category-2 add transaction is not valid unless it is preceded by a category-1 add transaction with the same key information. An existing category record can be changed by processing a category-1 change transaction and/or a category-2 change transaction. An existing category record can be deleted from the emission factor file by processing a category-1 delete transaction. A category-1 delete transaction also deletes all of the pollutant records associated with the category record.

A pollutant record can be added to the emission factor file by processing a pollutant (type 3) add transaction; however, the corresponding category record must exist in the emission factor file. If it does not, it must be added prior to adding the pollutant record. This may be accomplished in the same run since the emission factor file transaction sort program, CSREFTR (EC0010), sorts the transactions so that pollutant transactions follow their associated category transactions. An existing pollutant record can be changed by processing a pollutant change transaction. An existing pollutant record can be deleted from the emission factor file by processing a pollutant delete transaction. Each pollutant delete transaction deletes a single pollutant record from the emission factor file.

When the emission factor file is updated, the control date in the header record is updated using the date specified by the user on the option card. This header will also contain the date of the previous update run as well as a generation number which begins at 1 and is incremented by 1 during each update run.

There are three option fields on the option card. The first option field occurs in columns 1 through 5 and contains the control date in the Julian form YYDDD, where YY is the year and DDD is the day of the year. This date will replace the control date in the emission factor file header record, and therefore, it should be the current date of the run. If this field is either blank or not numeric, program execution will be terminated. The second option field occurs in columns 7 through 11. The option word FLAGW must be entered in this field for warning messages to be printed in the diagnostic report. If this field is blank, or if it is specified incorrectly, no warning messages will be printed. The third option field occurs in columns 13 through 16. The option word LIST must be entered in this field for the listings of the input emission factor file, the output emission factor file, and the emission factor file transactions to be produced. If this field is blank, or if it is specified incorrectly, no files will be listed.

ERPEFAC (EC0150) produces a detailed report of the EIS/AS emission factor file. This report is organized so that printed beneath each emission factor category record are the pollutant records subordinate to it. Headings are generated at the top of each page for both the emission factor category and pollutant records.

The run stream for this test run contains the JCL needed to create an EIS/AS emission factor file and produce a detailed report of this file. This run stream is shown in Figure AST1-3. It does not show all the input emission factor file transactions in the run stream, but does show the necessary JCL. The sample output produced by this procedure is shown in Figure AST1-4.

First, the run stream executes the cataloged procedure ECEME10 to create the emission factor file. Since this test run creates the initial EIS/AS emission factor file, there is obviously not an input emission factor file to be accessed. This is why the old emission factor file ECSOLEF must be a dummy file in the UPDATE step. Through the use of a substitutable parameter, the new emission factor file is named ECEMFL1. The user must supply the DD (data definition) information for the option card file in the UPDATE step and for the input emission factor file transaction file in the SORT step. The options specified in the UPDATE step of this test run are 80004, FLAGW, and LIST.

Next, the cataloged procedure ECRPE10 is executed to produce a detailed report. A substitutable parameter is used to specify ECEMFL1 as the input emission factor file.

Header Record

| Record Position | Field Length | Description |
|---|---|---|
| 1 - 23 | 23 | All Zeros |
| 24 - 80 | 57 | Filler |

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Figure AST1-1. Emission Factor File Transaction Format

Type 1 Transaction

| Record Position | Field Length | Description |
|---|---|---|
| 1 - 2 | 2 | State |
| 3 - 6 | 4 | County |
| 7 - 11 | 5 | Suballocation |
| 12 - 14 | 3 | Category |
| 15 - 16 | 2 | Disaggregation |
| 17 - 23 | 7 | Filler |
| 24 - 25 | 2 | Year |
| 26 - 28 | 3 | Day |
| 29 | 1 | Nitrogen Flag |
| 30 | 1 | Sulfur Flag |
| 31 | 1 | Ash Flag |
| 32 - 34 | 3 | Nitrogen Content |
| 35 - 37 | 3 | Sulfur Content |
| 38 - 40 | 3 | Ash Content |
| 41 - 65 | 25 | Category Description |
| 66 - 78 | 13 | Filler |
| 79 | 1 | Card Number (1) |
| 80 | 1 | Action Code |

(Page 2 of 4)

Figure AST1-1 - continued. Emission Factor File Transaction Format

Type 2 Transaction

| Record Position | Field Length | Description |
|---|---|---|
| 1 - 2 | 2 | State |
| 3 - 6 | 4 | County |
| 7 - 11 | 5 | Suballocation |
| 12 - 14 | 3 | Category |
| 15 - 16 | 2 | Disaggregation |
| 17 - 23 | 7 | Filler |
| 24 - 25 | 2 | Year |
| 26 - 28 | 3 | Day |
| 29 - 48 | 20 | County Name |
| 49 - 78 | 30 | Filler |
| 79 | 1 | Card Number (2) |
| 80 | 1 | Action Code |

(Page 3 of 4)

Figure ASTI-1 - continued. Emission Factor File Transaction Format

Type 3 Transaction

| Record Position | Field Length | Description |
|---|---|---|
| 1 - 2 | 2 | State |
| 3 - 6 | 4 | County |
| 7 - 11 | 5 | Suballocation |
| 12 - 14 | 3 | Category |
| 15 - 16 | 2 | Disaggregation |
| 17 | 1 | Emission Factor Origin |
| 18 | 1 | Emission Factor Source |
| 19 - 23 | 5 | Pollutant ID |
| 24 - 25 | 2 | Year |
| 26 - 28 | 3 | Day |
| 29 - 38 | 10 | Emission Factor |
| 39 | 1 | Confidence Level |
| 40 - 54 | 15 | Pollutant Name |
| 55 - 64 | 10 | Pollutant Specific Data |
| 65 - 78 | 14 | Filler |
| 79 | 1 | Card Number (3) |
| 80 | 1 | Action Code |

(Page 4 of 4)

Figure AST1-1 - continued. Emission Factor File Transaction Format

AGENCY________

EMISSIONS INVENTORY SYSTEM/AREA SOURCE (EIS/AS)
COMPREHENSIVE DATA HANDLING SYSTEM (CDHS)
EMISSION FACTOR FILE TRANSACTIONS

BY________
DATE________
PAGE____OF____

| STATE | COUNTY | SUBALLOC | CATEG NBR | DISAG NBR |
|---|---|---|---|---|
| 1 | 3 | 7 | 12 | 15 |
|  |  |  |  |  |

| DATE |  |
|---|---|
| YR | DAY |
| 24 | 26 |
|  |  |

| FLAGS |  |  | NITRO CONT | SULF CONT | ASH CONT | CATEGORY DESCRIPTION |  | NBR | ACTION |
|---|---|---|---|---|---|---|---|---|---|
| N | S | A |  |  |  |  |  |  |  |
| 29 | 30 | 31 | 32 | 35 | 38 | 41 62 |  | 79 | 80 |
|  |  |  | ▲ | ▲ | ▲ |  |  | 1 |  |

| COUNTY NAME |  | NBR | ACTION |
|---|---|---|---|
| 29 48 |  | 79 | 80 |
|  |  | 2 |  |

| ORG | SRC | POLLUTANT ID |
|---|---|---|
| 17 | 18 | 19 |
|  |  |  |
|  |  |  |
|  |  |  |
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|  |  |  |

| EMISSION FACTOR | CONF | POLLUTANT NAME | POLLUTANT SPECIFIC DATA |  | NBR | ACTION |
|---|---|---|---|---|---|---|
| 29 | 39 | 40 | 55 64 |  | 79 | 80 |
| ▲ |  |  |  |  | 3 |  |
| ▲ |  |  |  |  | 3 |  |
| ▲ |  |  |  |  | 3 |  |
| ▲ |  |  |  |  | 3 |  |
| ▲ |  |  |  |  | 3 |  |
| ▲ |  |  |  |  | 3 |  |
| ▲ |  |  |  |  | 3 |  |
| ▲ |  |  |  |  | 3 |  |
| ▲ |  |  |  |  | 3 |  |
| ▲ |  |  |  |  | 3 |  |
| ▲ |  |  |  |  | 3 |  |
| ▲ |  |  |  |  | 3 |  |
| ▲ |  |  |  |  | 3 |  |
| ▲ |  |  |  |  | 3 |  |
| ▲ |  |  |  |  | 3 |  |
| ▲ |  |  |  |  | 3 |  |

Figure AST1-2. Emission Factor File Transaction Load Sheet

```
//ASTESI01 JOB     (ACCOUNTING INFO)
//*
//*    CREATE AND PRINT THE EMISSION FACTOR FILE
//*
//TESI01A EXEC ECEMFIO,
//        NEWEMFF=ECEMFL1
//*
//*    CREATE THE INITIAL EMISSION FACTOR FILE
//*
//SORT.INPUT DD *
000000000000100       78179                RESIDENT ANTHRACITE COAL                   1A
000000000000100F 1110180050000010000 SUSPENDED PART.                               3A
000000000000100F 4210178179000090000 CARBON MONOXIDE                               3A
000000000000100F 4240180050000038000 SULFER DIOXIDES                               3A
000000000000100F 4260280050000003000    N  OXIDES                                  3A
000000000000100F 4310180050000002500 TOTAL HY CARBON                               3A
000000000000200       78179                RESIDENT BITUMINOUS COAL                   1A
000000000000200F 1110178179000020000 SUSPENDED PART.                               3A
000000000000200F 4210180050000090000 CARBON MONOXIDE                               3A
000000000000200F 4240180050000038000 SULFER DIOXIDE                                3A
000000000000200F 4260280050000003000    N  OXIDES                                  3A
000000000000200F 4310178179000020000 TOTAL HY CARBON                               3A
000000000000300       78179                RESIDENT DISTILLATE OIL                    1A
000000000000300F 1110180050000002500 SUSPENDED PART.                               3A
000000000000300F 4210180050000005000 CARBON MONOXIDE                               3A
000000000000300F 4240180050000014400 SULFUR DIOXIDE                                3A
000000000000300F 4260280050000018000    N  OXIDES                                  3A
000000000000300F 4310180050000001000 TOTAL HY CARBON                               3A
000000000000400       78179                RESIDENTIAL RESIDUAL OIL                   1A
000000000000400F 1110180050000016400 SUSPENDED PART.                               3A
000000000000400F 4210180050000005000 CARBON MONOXIDE                               3A
000000000000400F 4240180050000159000 SULFUR DIOXIDE                                3A
000000000000400F 4260280050000018000    N  OXIDES                                  3A
000000000000400F 4310180050000001000 TOTAL HY CARBON                               3A
000000000000500       78179                RESIDENTIAL NATURAL GAS                    1A
000000000000500F 1110178179000010000 SUSPENDED PART.                               3A
000000000000500F 4210180050000020000 CARBON MONOXIDE                               3A
000000000000500F 4240180050000000600 SULFUR DIOXIDE                                3A
000000000000500F 4260280050000080000    N  OXIDES                                  3A
000000000000500F 4310180050000008000 TOTAL HY CARBON                               3A
000000000000600       78179                RESIDENTIAL WOOD                           1A
000000000000600F 1110178179000025000 SUSPENDED PART.                               3A
000000000000600F 4210180050000150000 CARBON MONOXIDE                               3A
000000000000600F 4240180050000000500 SULFUR DIOXIDE                                3A
000000000000600F 4260280050000001000    N  OXIDES                                  3A
```

(Remainder of transactions omitted)

```
//UPDATE.ECSOLEF DD DUMMY
//UPDATE.OPTIONS DD *
ROUND FLAGS LIST
// EXEC ECPPFIO,
//        EMFLFIL=ECEMFL1
//*
//*    PRINT THE EMISSION FACTOR FILE CREATED IN STEP A
//*
```

Reproduced from best available copy.

Figure AST1-3. Run Stream

```
                    EIS/AS EMISSION FACTOR FILE TRANSACTION SORT PROGRAM  -  DIAGNOSTIC REPORT                        PAGE      1

PROGRAM NAME: CSREFFIR (EF0010)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980

                                                                919
NUMBER OF INPUT TRANSACTIONS:                                   920
NUMBER OF OUTPUT TRANSACTIONS:
```

(Page 1 of 7)

Figure AST1-4.  Sample Output

```
                          EIS/AS EMISSION FACTOR FILE EDIT-MAINTENANCE PROGRAM  -  DIAGNOSTIC REPORT                                        PAGE     1
PROGRAM NAME: CEMEFAC (ECU020)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980


OPTION CARD

   CONTROL DATE IS 80004,  ERROR OPTION IS FLAG  ,  LIST OPTION IS LIST



0000000000000000       79295
                                                                              1D
                  *** CEMEFAC 022 ERROR - DELETE SPECIFIED FOR NONEXISTENT EIS/AS EMF RECORD - CARD REJECTED
0000000000000000       79299
                                                                              1D
                  *** CEMEFAC 022 ERROR - DELETE SPECIFIED FOR NONEXISTENT EIS/AS EMF RECORD - CARD REJECTED
0000000000000300       79295
                                                                              1A
                  *** CEMEFAC 029 ERROR - DUPLICATE ADD TRANSACTION - CARD REJECTED
000000000000300S1111017929500000001111 TSP.          TONS/SQ. MI              3A
                  *** CEMEFAC 037 ERROR - COLUMN 17, EF ORIGIN MUST BE F FOR NEDS CATEGORY - CARD REJECTED
0000000000003600       78179           HVY DUTY GAS VEH RURAL RD              1A
                  *** CEMEFAC 029 ERROR - DUPLICATE ADD TRANSACTION - CARD REJECTED
0000000000003700       78179           HVY DUTY GAS VEH SUB' RD               1A
                  *** CEMEFAC 029 ERROR - DUPLICATE ADD TRANSACTION - CARD REJECTED
0000000000003800       78179           HVY DUTY GAS VEH URBAN RD              1A
                  *** CEMEFAC 029 ERROR - DUPLICATE ADD TRANSACTION - CARD REJECTED
0000000000004000       78179           HVY DUTY DIESEL VEH LACHP              1A
                  *** CEMEFAC 029 ERROR - DUPLICATE ADD TRANSACTION - CARD REJECTED
0000000000004400       78179           OFF HIGHWAY DIESEL VEH                 1A
                  *** CEMEFAC 029 ERROR - DUPLICATE ADD TRANSACTION - CARD REJECTED
0000000000004500       78179           RAILROAD LOCOMOTIVES                   1A
                  *** CEMEFAC 029 ERROR - DUPLICATE ADD TRANSACTION - CARD REJECTED
0000000000004600       78179           MILITARY AIRCRAFT LTO'S                1A
                  *** CEMEFAC 029 ERROR - DUPLICATE ADD TRANSACTION - CARD REJECTED
0000000000004700       78179           CIVIL AIRCRAFT LTO'S                   1A
```

(Page 2 of 7)

Figure AST1-4 - continued. Sample Output

```
                    EIS/AS EMISSION FACTOR FILE EDIT-MAINTENANCE PROGRAM  -  DIAGNOSTIC REPORT                        PAGE     8

22012200003527      79295NSA000000000CAT. DESCRIPTION               44
                        *** CEMEFAC 017 ERROR - COLUMN 79, CARD TYPE INVALID - CARD REJECTED
                        *** CEMEFAC 011 ERROR - COLUMN 12, CATEGORY NOT NUMERIC - CARD REJECTED
                        *** CEMEFAC 023 ERROR - COLUMN 15, DISAGGREGATION NOT NUMERIC - CARD REJECTED

999999999999999     79295                                           1C
                        *** CEMEFAC 005 ERROR - COLUMN 1, STATE INVALID - CARD REJECTED


NUMBER OF TRANSACTIONS READ:                                  920
NUMBER OF ERRORS DETECTED:                                    118
NUMBER OF WARNINGS DETECTED:                                    0
NUMBER OF TRANSACTIONS REJECTED:                              102
NUMBER OF EMISSION FACTOR FILE RECORDS READ:                    0
NUMBER OF EMISSION FACTOR FILE RECORDS WRITTEN:               682


PROGRAM NAME: CEMEFAC (EC0020)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980
```

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Figure AST1-4 - continued. Sample Output

```
                                   FIN/AS TRANSACTION FILE LISTING                                        PAGE    1

0000000000000000000000000000000000000000000000000000000000000000000000000000000000
0000000000000000        79295                                                     1D
0000000000000000        79299                                                     1D
0000000000000000        79295                                                     1A
0000000000000000        79295                                                     1C
0000000000000100        78179           RESIDENT ANTHRACITE COAL                  1A
0000000000000100F 1110180050000010000 SUSPENDED PART.                             3A
0000000000000100F 4210178179000090000 CARBON MONOXIDE                             3A
0000000000000100F 4240180050000038000 SULFER DIOXIDES                             3A
0000000000000100F 4260280050000003000    N  OXIDES                                3A
0000000000000100F 4310180050000002500 TOTAL HY CARBON                             3A
0000000000000200        78179           RESIDENT BITUMINOUS COAL                  1A
0000000000000200F 1110178179000020000 SUSPENDED PART.                             3A
0000000000000200F 4210180050000090000 CARBON MONOXIDE                             3A
0000000000000200F 4240180050000038000 SULFER DIOXIDE                              3A
0000000000000200F 4260280050000003000    N  OXIDES                                3A
0000000000000200F 4310178179000020000 TOTAL HY CARBON                             3A
0000000000000300        78179           RESIDENT DISTILLATE OIL                   1A
0000000000000300        79295                                                     1A
0000000000000300        79295BAD COUNTY                                           2A
0000000000000300F 1110180050000002500 SUSPENDED PART.                             3A
0000000000000300F 4210180050000005000 CARBON MONOXIDE                             3A
0000000000000300F 4240180050000144000 SULFUR DIOXIDE                              3A
0000000000000300F 4260280050000018000    N  OXIDES                                3A
0000000000000300F 4310180050000001000 TOTAL HY CARBON                             3A
0000000000000300S1111017929500000111 TSP.            TONS/SQ. MI                 3A
0000000000000400        78179           RESIDENTIAL RESIDUAL OIL                  1A
0000000000000400F 1110180050000016900 SUSPENDED PART.                             3A
0000000000000400F 4210180050000005000 CARBON MONOXIDE                             3A
0000000000000400F 4240180050000159000 SULFUR DIOXIDE                              3A
0000000000000400F 4260280050000018000    N  OXIDES                                3A
0000000000000400F 4310180050000001000 TOTAL HY CARBON                             3A
0000000000000500        78179           RESIDENTIAL NATURAL GAS                   1A
0000000000000500F 1110178179000010000 SUSPENDED PART.                             3A
0000000000000500F 4210180050000020000 CARBON MONOXIDE                             3A
0000000000000500F 4240180050000000600 SULFUR DIOXIDE                              3A
0000000000000500F 4260280050000080000    N  OXIDES                                3A
0000000000000500F 4310180050000008000 TOTAL HY CARBON                             3A
0000000000000600        78179           RESIDENTIAL WOOD                          1A
0000000000000600F 1110178179000025000 SUSPENDED PART.                             3A
0000000000000600F 4210180050000150000 CARBON MONOXIDE                             3A
0000000000000600F 4240180050000000500 SULFUR DIOXIDE                              3A
0000000000000600F 4260280050000001000    N  OXIDES                                3A
0000000000000600F 4310180050000006000 TOTAL HY CARBON                             3A
0000000000000700        78179           COMM-INST ANTHRACITE COAL                 1A
0000000000000700F 1110180050000001000 SUSPENDED PART.                             3A
```

(Page 4 of 7)

Figure AST1-4 - continued. Sample Output

```
                         EIS/AS EMISSION FACTOR FILE OUTPUT LISTING                                   PAGE    1
000000   0000000000000000000P0F08      00001
000000   000000000001       79295
000000   000000001001       78179                                    RESIDENT ANTHRACITE COAL
000000   000000010021 11101R005000000100000SUSPENDED PART.
000000   000000010021 421017817900000900000CARBON MONOXIDE
000000   000000010021 42401R005000003800000SULFUR DIOXIDES
000000   000000010021 42602R00500000030000    N OXIDES
000000   000000010021 43101R005000000250000TOTAL HY CARBON
000000   000000002001       78179                                    RESIDENT BITUMINOUS COAL
000000   000000020021 111017817900000200000SUSPENDED PART.
000000   000000020021 42101R005000000900000CARBON MONOXIDE
000000   000000020021 42401R005000003800000SULFUR DIOXIDE
000000   000000020021 42602R00500000030000    N OXIDES
000000   000000020021 431017817900000200000TOTAL HY CARBON
000000   000000003001       79295            BAD COUNTY              RESIDENT DISTILLATE OIL
000000   000000030021 11101R005000000025000SUSPENDED PART.
000000   000000030021 42101R005000000050000CARBON MONOXIDE
000000   000000030021 42401R005000001440000SULFUR DIOXIDE
000000   000000030021 42602R00500000180000    N OXIDES
000000   000000030021 43101R005000000010000TOTAL HY CARBON
000000   000000004001       78179                                    RESIDENTIAL RESIDUAL OIL
000000   000000040021 11101R005000000169000SUSPENDED PART.
000000   000000040021 42101R005000000050000CARBON MONOXIDE
000000   000000040021 42401R005000001590000SULFUR DIOXIDE
000000   000000040021 42602R00500000180000    N OXIDES
000000   000000040021 43101R005000000010000TOTAL HY CARBON
000000   000000005001       78179                                    RESIDENTIAL NATURAL GAS
000000   000000050021 111017817900000100000SUSPENDED PART.
000000   000000050021 42101R005000000200000CARBON MONOXIDE
000000   000000050021 42401R005000000006000SULFUR DIOXIDE
000000   000000050021 42602R00500000080000    N OXIDES
000000   000000050021 43101R005000000080000TOTAL HY CARBON
000000   000000006001       78179                                    RESIDENTIAL WOOD
000000   000000060021 111017817900000250000SUSPENDED PART.
000000   000000060021 42101R005000001500000CARBON MONOXIDE
000000   000000060021 42401R005000000005000SULFUR DIOXIDE
000000   000000060021 42602R00500000010000    N OXIDES
000000   000000060021 43101R005000000060000TOTAL HY CARBON
000000   000000007001       78179                                    COMM-INST ANTHRACITE COAL
000000   000000070021 11101R005000000010000SUSPENDED PART.
000000   000000070021 42101R005000000010000CARBON MONOXIDE
000000   000000070021 42401R00500000380000 SULFUR DIOXIDE
000000   000000070021 42602R00500000010000    N OXIDES
000000   000000070021 43101R005000000000000TOTAL HY CARBON
000000   000000008001       78179                                    COMM-INST BITUMINOUS COAL
000000   000000080021 111017817900000580000SUSPENDED PART.
```

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Figure AST1-4 - continued. Sample Output

```
                    EIS/AS EMISSION FACTOR FILE DETAILED REPORT PROGRAM  -  DIAGNOSTIC REPORT              PAGE    1

PROGRAM NAME: CRPEFAC (ECU150)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980

EMISSION FACTOR FILE RECORD COUNT:        682
NUMBER OF CATEGORIES IN LIST:              94
NUMBER OF POLLUTANT ENTRIES IN LIST:      587
   FEDERAL POLLUTANT ENTRIES:             320
   STATE POLLUTANT ENTRIES:               133
   LOCAL POLLUTANT ENTRIES:               134
NUMBER OF ERRORS:                           0
NUMBER OF PAGES IN REPORT:                 19
```

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Figure AST1-4 - continued. Sample Output

```
                                        EIS/AS EMISSION FACTOR FILE DETAILED REPORT                                  PAGE   11

STATE     COUNTY                               SUBALLOC    EISAG      CATEGORY                               CAT DATE     FLAGS/CONTENTS %'S
       CODE  NAME                              NUMBER        #      NUMBER    DESCRIPTION                    YY  DDD    NIT       SUL      ASH
------------------------------------------------------------------------------------------------------------------------------------------------

                                                 ENF DATE       POLLUTANT                                           EMISSION      CONF        POLLUTANT
                                                  YY  DDD      ID         NAME                ORIG   SOURCE           FACTOR      LEVEL       SPEC DATA
                                                 -----------------------------------------------------------------------------------------------

 00      0000                                  00000        00        061     MANAGED BURNING-PRESCRIBE     78  179
                                                   78  179     11101      SUSPENDED PART.      FEDERAL                 17.000       0
                                                   80  050     42101      CARBON MONOXIDE      FEDERAL                100.000       0
                                                   80  050     42401      SULFUR DIOXIDE       FEDERAL                  0.150       0
                                                   80  050     42602        N  OXIDES          FEDERAL                  4.000       0
                                                   80  050     43101      TOTAL HY CARBON      FEDERAL                 24.000       0

 00      0000                                  00000        00        062     AGRICULTURE FIELD BURNING     78  179
                                                   78  179     11101      SUSPENDED PART.      FEDERAL                 17.000       0
                                                   80  050     42101      CARBON MONOXIDE      FEDERAL                100.000       0
                                                   80  050     42401      SULFUR DIOXIDE       FEDERAL                  0.000       0
                                                   80  050     42602        N  OXIDES          FEDERAL                  2.000       0
                                                   80  050     43101      TOTAL HY CARBON      FEDERAL                 20.000       0

 00      0000                                  00000        00        063     FROST CNTRL-ORCHARD HEATR     78  179
                                                   78  179     11101      SUSPENDED PART.      FEDERAL                  0.200       0
                                                   78  179     42101      CARBON MONOXIDE      FEDERAL                 22.000       0
                                                   80  050     42401      SULFUR DIOXIDE       FEDERAL                  0.100       0
                                                   80  050     42602        N  OXIDES          FEDERAL                  0.000       0
                                                   80  050     43101      TOTAL HY CARBON      FEDERAL                 43.000       0

 00      0000                                  00000        00        064     STRUCTURAL FIRES              78  179
                                                   80  050     11101      SUSPENDED PART.      FEDERAL                143.000       0
                                                   80  050     42101      CARBON MONOXIDE      FEDERAL                582.000       0
                                                   80  050     42401      SULFUR DIOXIDE       FEDERAL                  0.400       0
                                                   80  050     42602        N  OXIDES          FEDERAL                 17.000       0
                                                   80  050     43101      TOTAL HY CARBON      FEDERAL                107.000       0

 06      1280  ANY-NAME                        00000        00        000     RESIDENT ANTHRACITE COAL      79  297  N/.010   S/20.0   A/ 3.0
                                                   79  299     11101      PARTICULATES          STATE                   1.000       0
                                                   79  310     42101      CARBON MONOXIDE       STATE                   0.100       0
                                                   79  310     42401      SULFUR DIOXIDE        STATE                   0.100       0
                                                   79  310     42602      NITROGEN OXIDES       STATE                   0.200       0
                                                   79  310     43101      HYDROCARBONS          STATE                   0.070       0
                                                   79  299     11101      PARTICULATES          LOCAL                  12.000       0
                                                   79  296     42101      CARBON MONOXIDE       LOCAL                   0.000       0
                                                   79  296     42401      SULFUR DIOXIDE        LOCAL                   0.000       0
                                                   79  296     42602      NITROGEN OXIDES       LOCAL                   0.000       0
                                                   79  296     43101      HYDROCARBONS          LOCAL                   0.000       0

 06      1280  ANY-NAME                        00000        00        002     RESIDENT BITUMINOUS COAL      79  297  N/.100             A/ 4.0
                                                   79  299     11101      PARTICULATES          STATE                   2.000       0
                                                   79  310     42101      CARBON MONOXIDE       STATE                   0.575       0
```

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Figure AST1-4 - continued. Sample Output

## EIS/AS Test 2

## Create the Initial Master File Using NEDS Transactions

In this test run, the initial EIS/AS master file is created from NEDS transactions using the cataloged procedure ECFMM20 which executes CCENETR (EC0030), the NEDS to EIS/AS master file transaction conversion-edit program; CSRINTR (EC0050), the master file internal transaction sort program; CMSEFIN (EC0060), the master file internal transaction emission factor insertion program; and CFMMSTR (EC0070), the master file maintenance program.

CCENETR (EC0030) edits the input NEDS area source transactions and converts those that pass the edit criteria into EIS/AS internal transactions. The input NEDS area source transactions include the A1 thru A7 cards. Refer to Figure AST2-1 for the transaction formats.

Description, category, and NEDS comment internal transactions are generated from the NEDS transactions. A NEDS A1 add transaction will generate the description transactions used to build a county description record in the master file. A NEDS A6 add transaction will add a NEDS A6 comment record to the master file. A NEDS A7 or any category field on the NEDS A1 thru A5 cards will generate the category transactions necessary to add the category to the master file. Note that the county description record must exist before category or comment records are added for the county. Internal transactions produced in CCENETR (EC0030) will have a geographic suballocation number of zero (that is, only county records). Category transactions for categories 001-064 will be generated for those categories passing edit criteria; the category disaggregation number will be zero.

All NEDS transactions are edited for valid state, county, AQCR, action code, A-type card, and card number. If any of these fields are in error, the transaction will be rejected, and no EIS/AS internal transactions will be created from that NEDS transaction. An invalid value in any other NEDS field will result in that field being rejected, but other fields on that transaction will be accepted if valid.

The options in this program are used to determine if the year field in the NEDS A1 transaction is valid, if the warning messages are to appear in the diagnostic report, and if the input NEDS transactions and output internal transactions should be printed. A two-digit year must be specified in card columns 1 and 2 of the option card in order to edit the year field in the NEDS A1 transaction (the NEDS A1 year must not be greater than the option card year). If the warning messages are to be printed in the diagnostic report, the word FLAGW must appear in card columns 4 through 8; or, the warning-level messages will be suppressed. In order for the input NEDS transactions and output internal transactions to be printed, the word LIST must appear in card columns 10 through 13 of the option card; otherwise, the listings will not be printed. A valid option card must be present in the run stream; failure to enter the option card will cause program execution to be terminated prematurely.

CSRINTR (EC0050) sorts the master file internal transactions into the sequence required by CMSEFIN (EC0060) and CFMMSTR (EC0070). All master file internal transactions must be sorted by CSRINTR (EC0050) before they can be used to create (or update) the EIS/AS master file. A header record is generated by CSRINTR (EC0050) which appears as the first transaction but has no action code or card number.

CMSEFIN (EC0060) inserts emission factor information from the EIS/AS emission factor file into the category-2 and category-5 internal transactions. The information to be inserted, as well as the conditions for insertion, are specified on the option card.

In order to insert the information, CMSEFIN (EC0060) matches category-2 transactions to category records in the emission factor file and category-5 transactions to pollutant records. For category-2 transactions, a matching state- or local-origin record is sought; if one is not found, a matching federal-origin record is sought. Since category-5 records contain a character to indicate federal, state, or local origin, a matching record of that specified origin is sought.

If a matching emission factor file record is found for an internal transaction, the information in that record is inserted into the appropriate fields of the transaction. No changes are made to any of the other input internal transactions.

The user can specify by means of an option card the transaction fields for insertion and can specify whether or not data from the emission factor file should override (i.e., replace) existing data in any of those fields. The user can also specify whether or not emission factor file data must satisfy date criteria and whether or not warning messages should be printed. All options are specified in fixed fields on the option card. See Figure AST2-2 for the format of the option card.

A transaction field is specified for insertion by coding its identifier and an 'I' in the appropriate option card field. The valid fields for insertion and their identifiers are as follows:

| Field | Identifier |
|---|---|
| Nitrogen Content | NIT |
| Sulfur Content | SUL |
| Ash Content | ASH |
| Emission Factor | EMISSION |
| Confidence Level | CONF |
| Pollutant-Specific Data | SPEC |

If no valid fields are specified for insertion, the emission factor and confidence level fields are assumed as defaults.

If a valid transaction field has been specified for insertion, that field must be blank for any data to be inserted. If the user desires to insert data into a field regardless of its content, he can specify an override for that field by coding an 'O' in the appropriate option card field. If an override is specified for a particular field, any data in that field will be replaced with data from the matching emission factor file record.

Date criteria can be established for insertions by coding a date identifier and a date value. For nitrogen, sulfur, and ash content, the date identifier is 'CDAT' (category record date); for emission factor, confidence level, and pollutant-specific data, the date identifier is 'PDAT' (pollutant record date). The date value is expressed as a Julian date; that is, as a 5-character number, the first two digits of which represent the year and the last three, the day within the year. No insertion will be made into a field if the date of the matching emission factor file record is prior to the date specified for that field. If no date criteria are specified, insertions into the specified fields will be made regardless of the dates of the emission factor file records.

If 'FLAGW' is coded in the warning message suppression field of the option card, all warning messages will be printed in the diagnostic report; if 'NOFLAGW' is coded, no warning messages will be printed. If this field is left blank or improperly coded, NOFLAGW is assumed.

CFMMSTR (EC0070) creates and maintains the EIS/AS master file which is a variable-length, sequential file. This file contains three types of records: description, category, and comment.

The description record contains general descriptive information pertaining to a geographic area. This geographic area may be either a county or a smaller area denoted by a nonzero geographic suballocation number. A county description record must be present before any other records can be accepted for that county; i.e., suballocation description, category, and comment records. Also a description record (county or suballocation) must be present before any category records (including category disaggregation records) or comment records can be accepted for that geographic area.

Category records contain emission information for a geographic area and are subordinate to the description record for that area. There can be up to 999 category records for each geographic area: category records 001-064 are used for the NEDS categories; 065-998 are used for user-defined categories, and category 999 is generated by CFMMSTR (EC0070). In addition, each category can be disaggregated with a separate record describing each disaggregation. The category 999 record contains a summary of emissions for all the category records with a disaggregation number of zero.

The comment records are used to include additional information for both geographic areas (county and/or suballocation description records) and categories (both category and disaggregation). There can only be one NEDS comment record for a county description record; all other EIS/AS records can have up to 999 comment records. Comment records will only be added if there is a record in the master file (description or category) with matching key information, including state, county, geographic suballocation number, category number, and category disaggregation number.

The options in CFMMSTR (EC0070) are used to determine if the warning messages are to be printed in the diagnostic report and if the listings of the input and output master file and of the internal transactions should be produced. A two-digit year may be specified in card columns 1 and 2. A value of FLAGW in card columns 4 through 8 will allow the warning messages to be printed. Otherwise, no warning messages will be printed. Similarly, a value of LIST in card columns 10 through 13 will produce all the listings. Otherwise, the listings will not be produced.

The run stream for this test run contains the JCL necessary for creating an EIS/AS master file from NEDS area source transactions. This run stream is shown in Figure AST2-3. It does not show all the input NEDS transactions in the run stream, but does show the necessary JCL.

The cataloged procedure executed by this run stream is ECFMM20. For the CONVERT step, the user must supply the DD (data definition) information for the option card file and the input NEDS transaction file. The options specified in the CONVERT step are 80, FLAGW and LIST. The user must also supply the DD information for the option card file in the INSERT step. In this step of the test run the options specified are: NOFLAGW, NIT IO, SUL IO, ASH IO, EMISSION IO, CONF IO, and SPEC IO. Since this test run creates the initial EIS/AS master file , there is obviously not an input master file to be accessed. This is why the old master file ECSOLMF must be a dummy file in the UPDATE step. Also, the options specified in the UPDATE step are 80, FLAGW and LIST. Through the use of substitutable parameters, the emission factor file is specified as ECEMFL1 (created in Test 1) and the new master file is named ECMSTR1. Refer to Figure AST2-4 for the sample output produced by this run stream.

NEDS A1 Transaction

| Column # | Field Length | Data Type | Description |
|---|---|---|---|
| 1 - 2 | 2 | Numeric | State |
| 3 - 6 | 4 | Numeric | County |
| 7 - 9 | 3 | Numeric | AQCR |
| 10 - 11 | 2 | Numeric | Year of Record |
| 12 - 16 | 5 | Numeric | SIP Estimate - TSP |
| 17 - 20 | 4 | Numeric | SIP Estimate - $SO_2$ |
| 21 - 24 | 4 | Numeric | SIP Estimate - $NO_x$ |
| 25 - 29 | 5 | Numeric | SIP Estimate - HC |
| 30 - 34 | 5 | Numeric | SIP Estimate - CO |
| 35 - 36 | 2 | Numeric | Sulfur Content - Anthracite Coal |
| 37 - 38 | 2 | Numeric | Sulfur Content - Bituminous Coal |
| 39 - 40 | 2 | Numeric | Sulfur Content - Distillate Oil |
| 41 - 42 | 2 | Numeric | Sulfur Content - Residual Oil |
| 43 - 45 | 3 | Numeric | Ash Content - Anthracite Coal |
| 46 - 48 | 3 | Numeric | Ash Content - Bituminous Coal |
| 49 - 53 | 5 | Numeric | Residential Fuel - Anthracite Coal |

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Figure AST2-1. NEDS Area Source Transaction Formats

NEDS A1 Transaction (continued)

| Column # | Field Length | Data Type | Description |
|---|---|---|---|
| 54 - 59 | 6 | Numeric | Residential Fuel - Bituminous Coal |
| 60 - 64 | 5 | Numeric | Residential Fuel - Distillate Oil |
| 65 - 68 | 4 | Numeric | Residential Fuel - Residual Oil |
| 69 - 73 | 5 | Numeric | Residential Fuel - Natural Gas |
| 74 - 77 | 4 | Numeric | Residential Fuel - Wood |
| 78 | 1 | Alphabetic | Action Code |
| 79 | 1 | Alphabetic | 'A' (Area Source) |
| 80 | 1 | Numeric | '1' (Card Number) |

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Figure AST2-1 - continued. NEDS Area Source Transaction Formats

NEDS A2 Transaction

| Column # | Field Length | Data Type | Description |
|---|---|---|---|
| 1 - 2 | 2 | Numeric | State |
| 3 - 6 | 4 | Numeric | County |
| 7 - 9 | 3 | Numeric | AQCR |
| 10 - 14 | 5 | Numeric | Commercial Fuel - Anthracite Coal |
| 15 - 19 | 5 | Numeric | Commercial Fuel - Bituminous Coal |
| 20 - 24 | 5 | Numeric | Commercial Fuel - Distillate Oil |
| 25 - 29 | 5 | Numeric | Commercial Fuel - Residual Oil |
| 30 - 33 | 4 | Numeric | Commercial Fuel - Natural Gas |
| 34 - 35 | 2 | Numeric | Commercial Fuel - Wood |
| 36 - 41 | 6 | Numeric | Industrial Fuel - Anthracite Coal |
| 42 - 47 | 6 | Numeric | Industrial Fuel - Bituminous Coal |
| 48 - 51 | 4 | Numeric | Industrial Fuel - Coke |
| 52 - 56 | 5 | Numeric | Industrial Fuel - Distillate Oil |

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Figure AST2-1 - continued. NEDS Area Source Transaction Formats

NEDS A2 Transaction (continued)

| Column # | Field Length | Data Type | Description |
|---|---|---|---|
| 57 - 61 | 5 | Numeric | Industrial Fuel - Residual Oil |
| 62 - 66 | 5 | Numeric | Industrial Fuel - Natural Gas |
| 67 - 69 | 3 | Numeric | Industrial Fuel - Wood |
| 70 - 73 | 4 | Numeric | Industrial Fuel - Process Gas |
| 74 - 77 | 4 | Blank | Unused |
| 78 | 1 | Alphabetic | Action Code |
| 79 | 1 | Alphabetic | 'A' (Area Source) |
| 80 | 1 | Numeric | '2' (Card Number) |

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Figure AST2-1 - continued. NEDS Area Source Transaction Formats

## NEDS A3 Transaction

| Column # | Field Length | Data Type | Description |
|---|---|---|---|
| 1 - 2 | 2 | Numeric | State |
| 3 - 6 | 4 | Numeric | County |
| 7 - 9 | 3 | Numeric | AQCR |
| 10 - 15 | 6 | Numeric | On Site Incineration - Residential |
| 16 - 20 | 5 | Numeric | On Site Incineration - Industrial |
| 21 - 24 | 4 | Numeric | On Site Incineration - Commercial |
| 25 - 30 | 6 | Numeric | Open Burning - Residential |
| 31 - 36 | 6 | Numeric | Open Burning - Industrial |
| 37 - 41 | 5 | Numeric | Open Burning - Commercial |
| 42 - 48 | 7 | Numeric | Gasoline Fuel - Light Vehicle |
| 49 - 54 | 6 | Numeric | Gasoline Fuel - Heavy Vehicle |
| 55 - 60 | 6 | Numeric | Gasoline Fuel - Off Highway |
| 61 - 66 | 6 | Numeric | Diesel Fuel - Heavy Vehicle |
| 67 - 71 | 5 | Numeric | Diesel Fuel - Off Highway |
| 72 - 76 | 5 | Numeric | Diesel Fuel - Rail Locomotive |
| 77 | 1 | Numeric | Population Code |
| 78 | 1 | Alphabetic | Action Code |
| 79 | 1 | Alphabetic | 'A' (Area Source) |
| 80 | 1 | Numeric | '3' (Card Number) |

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Figure AST2-1 - continued. NEDS Area Source Transaction Formats

NEDS A4 Transaction

| Column # | Field Length | Data Type | Description |
|---|---|---|---|
| 1 - 2 | 2 | Numeric | State |
| 3 - 6 | 4 | Numeric | County |
| 7 - 9 | 3 | Numeric | AQCR |
| 10 - 13 | 4 | Numeric | Aircraft - Military |
| 14 - 19 | 6 | Numeric | Aircraft - Civil |
| 20 - 24 | 5 | Numeric | Aircraft - Commercial |
| 25 - 28 | 4 | Numeric | Vessels - Coal |
| 29 - 32 | 4 | Numeric | Vessels - Diesel Oil |
| 33 - 37 | 5 | Numeric | Vessels - Residual Oil |
| 38 - 41 | 4 | Numeric | Vessels - Gasoline |
| 42 - 47 | 6 | Numeric | Evaporation - Solvent Purchased |
| 48 - 52 | 5 | Numeric | Evaporation - Gasoline Marketed |
| 53 - 58 | 6 | Numeric | Measured Vehicle Miles - Limited Access Road |
| 59 - 64 | 6 | Numeric | Measured Vehicle Miles - Rural Road |
| 65 - 70 | 6 | Numeric | Measured Vehicle Miles - Suburban Road |
| 71 - 77 | 7 | Numeric | Measured Vehicle Miles - Urban Road |
| 78 | 1 | Alphabetic | Action Code |
| 79 | 1 | Alphabetic | 'A' (Area Source) |
| 80 | 1 | Numeric | '4' (Card Number) |

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Figure AST2-1 - continued. NEDS Area Source Transaction Formats

## NEDS A5 Transaction

| Column # | Field Length | Data Type | Description |
|---|---|---|---|
| 1 - 2 | 2 | Numeric | State |
| 3 - 6 | 4 | Numeric | County |
| 7 - 9 | 3 | Numeric | AQCR |
| 10 - 16 | 7 | Numeric | Dirt Roads Traveled |
| 17 - 21 | 5 | Numeric | Dirt Air Strips |
| 22 - 27 | 6 | Numeric | Construction Acres |
| 28 - 32 | 5 | Numeric | Miscellaneous Wind Erosion |
| 33 - 37 | 5 | Numeric | Land Tilling |
| 38 - 44 | 7 | Numeric | Forest Wildfires - Acres Burned |
| 45 - 47 | 3 | Numeric | Forest Wildfires - Tons per Acre Burned |
| 48 - 53 | 6 | Numeric | Managed Burning - Acres Burned |
| 54 - 56 | 3 | Numeric | Managed Burning - Tons per Acre Burned |
| 57 - 62 | 6 | Numeric | Agricultural Field Burning - Acres Burned |
| 63 - 65 | 3 | Numeric | Agricultural Field Burning - Tons per Acre Burned |
| 66 - 69 | 4 | Numeric | Frost Control - Orchard Heaters Operating |
| 70 - 72 | 3 | Numeric | Frost Control - Days Fired |

(Page 7 of 10)

Figure AST2-1 - continued. NEDS Area Source Transaction Formats

NEDS A5 Transaction (continued)

| Column # | Field Length | Data Type | Description |
|---|---|---|---|
| 73 - 77 | 5 | Numeric | Structure Fires |
| 78 | 1 | Alphabetic | Action Code |
| 79 | 1 | Alphabetic | 'A' (Area Source) |
| 80 | 1 | Numeric | '5' (Card Number) |

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Figure AST2-1 - continued. NEDS Area Source Transaction Formats

NEDS A6 Transaction

| Column # | Field Length | Data Type | Description |
|---|---|---|---|
| 1 - 2 | 2 | Numeric | State |
| 3 - 6 | 4 | Numeric | County |
| 7 - 9 | 3 | Numeric | AQCR |
| 10 - 77 | 68 | Alphanumeric | Comments |
| 78 | 1 | Alphabetic | Action Code |
| 79 | 1 | Alphabetic | 'A' (Area Source) |
| 80 | 1 | Numeric | '6' (Card Number) |

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Figure AST2-1 - continued. NEDS Area Source Transaction Formats

NEDS A7 Transaction

| Column # | Field Length | Data Type | Description |
|---|---|---|---|
| 1 - 2 | 2 | Numeric | State |
| 3 - 6 | 4 | Numeric | County |
| 7 - 9 | 3 | Numeric | AQCR |
| 10 - 11 | 2 | Numeric | Year of Record |
| 12 - 13 | 2 | Numeric | Source Code |
| 14 - 19 | 6 | Numeric | Emission Estimate - TSP |
| 20 - 24 | 5 | Numeric | Emission Estimate - $SO_2$ |
| 25 - 30 | 6 | Numeric | Emission Estimate - $NO_x$ |
| 31 - 36 | 6 | Numeric | Emission Estimate - HC |
| 37 - 43 | 7 | Numeric | Emission Estimate - CO |
| 44 - 77 | 34 | Alphanumeric | Comment |
| 78 | 1 | Alphabetic | Action Code |
| 79 | 1 | Alphabetic | 'A' (Area Source) |
| 80 | 1 | Numeric | '7' (Card Number) |

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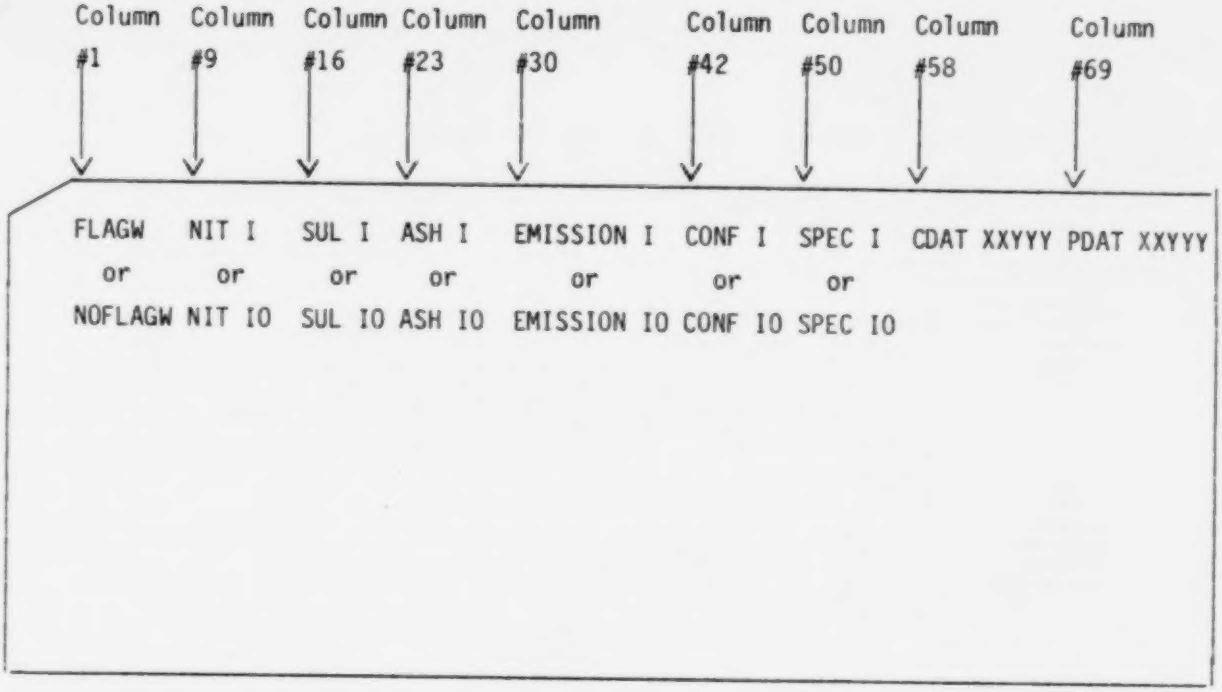
Figure AST2-1 - continued. NEDS Area Source Transaction Formats


Column #1
Column #9
Column #16
Column #23
Column #30
Column #42
Column #50
Column #58
Column #69
FLAGW or NOFLAGW
NIT I or NIT IO
SUL I or SUL IO
ASH I or ASH IO
EMISSION I or EMISSION IO
CONF I or CONF IO
SPEC I or SPEC IO
CDAT XXYYY
PDAT XXYYY

Note: 1. XX denotes the year; YYY the Julian date

2. Each field must contain one of the possible values indicated for it or be blank.

Figure AST2-2. Option Card Format

```
//ASTESI02 JOB    (ACCOUNTING INFO)
//*
//*   CREATE THE INITIAL MASTER FILE USING NEDS TRANSACTIONS
//*
//TESI02A EXEC ECEMR20,
//       EMFCFIL=FLEMFL1,
//       NEWMSTR=FLMSTR1
//*
//*   USE NEDS TRANSACTIONS TO CREATE THE ORIGINAL MASTER FILE
//*
//CONVERT.INPUT DD *
1478400747500197000300100001500055063803110930930000100010100137    00042    AA1
147840074     000030002500051000012          000037    000311000300007       AA2
147840074000947                           000567100081000065200062600001001210AA3
147840074    000305                   0267000525000089       003090       0005303AA4
14784007400000005     000087000990022      012                          00052AA5
147840074WABASH                                                          AA6
14784007480050000300000200001500025000040000A7 EMISSION RECORDED        AA7
14784007480340003000002000015000250000400047 EMISSION RECORDED         AA7
14784007480010003000002000015000250000400047 EMISSION RECORDED         AA7
14784007480490003000002000015000250000400047 EMISSION RECORDED         AA7
14784007480050000300000200001500025000040000A7 EMISSION RECORDED        AA7
147860065750113800070022000230009806380311043093000010000610018 3    00096    AA1
147860065     000040003400045 0025          000281    000620017000023       AA2
147860065001067                           000120480017210011840015800000300314 5AA3
147860065    000767                   000600056700207      000113       000065 1AA4
147860065000030     000167002850004 9       012                         000060AA5
147860065WARREN                                                          AA6
14786006580022000030000021000151020250001200000A7 EMISSION RECORDED     AA7
14786006580140003000002100015102025000120000A7 EMISSION RECORDED       AA7
14786006580640003000002100015102025000120000A7 EMISSION RECORDED       AA7
148040074750050000300140000180006700630031104309300001000103000 4    00080    AA1
148040074     000030002600030 0051          000059    000140005000004       AA2
148040074001228                           000331001190001030011070000300104AA3
148040074    000075                   0004270014 4      00798 6       000430 2AA4
1480400740000014    00001300312 00605       012                         00067AA5
148040074WAYNE                                                           AA6
14804007480190003000002200015172525900160000A7 EMISSION RECORDED       AA7
14804007480280003000002000151705250010000047 EMISSION RECORDED         AA7
14804007480440003000012000111705220001020000A7 EMISSION RECORDED       AA7
14804007480510000300001200011170522000102000A7 EMISSION RECORDED       AA7
```

(Remainder of transactions omitted)

```
//CONVERT.OPTIONS DD *
NO FLAGS LIST
//INSERT.OPTIONS DD *
NOFLAGS NIT TO SUL ID ESM TO EMISSION TO LONE TO SPEC TO
//UPDATE.ECSOLMF DD DUMMY,DCB=BLKSIZE=132,
//UPDATE.OPTIONS DD *
NO FLAGS LIST
```

Figure AST2-3.  Run Stream

```
                    NEDS TO EIS/AS CONVERSION-EDIT PROGRAM DIAGNOSTIC REPORT                                   PAGE    1

PROGRAM NAME: CCENETH (EC0030)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980

OPTION CARD

    CONTROL DATE IS 80  ,  ERROR OPTION IS FLAGW  ,  LIST OPTION IS LIST


\484007486050003000002000015000025000040000A7 EMISSION RECORDED              AA7
8E
          *** CCENETH 085 ERROR - COLUMN 01 - INVALID STATE-TRANSACTION REJECTED



- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -



                   NEDS TO EIS/AS CONVERSION-EDIT PROGRAM DIAGNOSTIC REPORT                                  PAGE    2

NUMBER OF NEDS TRANSCTIONS READ:                                   69
NUMBER OF ERRORS DETECTED:                                          1
NUMBER OF ABORTS DETECTED:                                          0
NUMBER OF CONDITIONALS DETECTED:                                    0
NUMBER OF INTERNAL TRANSACTIONS WRITTEN:                        2,089
```

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Figure AST2-4. Sample Output

```
                                         NEDS AREA SOURCE TRANSACTION LISTING                                          PAGE    1

1478400747500197000300100001500055063803110930930000100010100137    00042    AA1
147840074     0000300023000310012        000037    000110003000007           AA2
1478400740000947                         000567100081000065200082600001001216AA3
147840074    000365                  026700052500089      003098      0005303AA4
1478400740000005     0000670009900224       012                         00052AA5
147840074WABASH                                                              AA6
14784007480050003000002000015000025000040000A7 EMISSION RECORDED             AA7
14784007480340003000002000015000025000040000A7 EMISSION RECORDED             AA7
14784007480010003000002000015000025000040000A7 EMISSION RECORDED             AA7
14784007480490003000002000015000025000040000A7 EMISSION RECORDED             AA7
\4840007480050003000002000015000025000040000A7 EMISSION RECORDED             AA7
147860065750113600700220002300098063803110930930000100008100183     00096    AA1
147860065     0000400034000450025        000281    000620017000023           AA2
147860065001467                          001204800172100118400156600003003145AA3
147860065    000767                  006600056700207      009113      0008651AA4
1478600650000030     0001670028500649       012                         00080AA5
147860065WARREN                                                              AA6
14786006580220003000002100015102025000120000A7 EMISSION RECORDED             AA7
14786006580140003000002100015102025000120000A7 EMISSION RECORDED             AA7
14786006580640003000002100015102025000120000A7 EMISSION RECORDED             AA7
14804007475005400003001400018000067063803110930930000100010300044   00069    AA1
148040074     0000300026000340031        000059    000190005000004           AA2
148040074001228                          000633100119000103000110700003001094AA3
148040074    000475                      00062700164      007986      0004302AA4
1480400740000014     0000130031200605       012                         00067AA5
148040074WAYNE                                                               AA6
14804007460190003000002200015172525900160000A7 EMISSION RECORDED             AA7
14804007480280003000000200015170525000100000A7 EMISSION RECORDED             AA7
14804007480440003000001200011170522000102000A7 EMISSION RECORDED             AA7
14804007480510003000001200011170522000102000A7 EMISSION RECORDED             AA7
4206801987501300060009002400022900   100218  091     00000500099    000130089AA1
420680198     00011          0001                   00006     00001          AA2
420680198               0002700000100025001172200034100116600148000011000131AA3
420680198    000584                  057500078900273                         AA4
4206801980015840     114000          0000457009002870003                     AA5
420680198                                                                    AA6
42068019880040003000041200015170527000102400A7 EMISSION RECORDED             AA7
42068019880130003000041200015170507000102000A7 EMISSION RECORDED             AA7
42068019880370003000041200015170507000102000A7 EMISSION RECORDED             AA7
4213801987501600070073002000003500   100218  091     00001300273    000280052AA1
421380198     0001600001000020019                   00035     00007          AA2
421380198               00023300000200024002196500063900119900202400011000182AA3
421380198    000511                  007600170000218                         AA4
4213801980019404     152000          0000207009009405003                     AA5
421380198                                                                    AA6
42138019880330003000041200010170507000102000A7 EMISSION RECORDED             AA7
```

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Figure AST2-4 - continued. Sample Output

```
                                        EIS/AS INTERNAL TRANSACTION LISTING                                          PAGE    1
147840    0000000000000011CG07475
147840    0000000000000071CG07411101PARTICULATES   U        42602NITROGEN OXIDESU
147840    0000000000000071CG07442401SULFUR DIOXIDE U        43101HYDROCARBONS   U
147840    0000000000000071CG07442101CARBON MONOXIDEU
147840    0000000000000051CG07400197000300100001500055
147840    0000000000000031CG074                            06380311093093
147840    0000000100100011CA074RESIDENT ANTHRACITE COAL   000000001
147840    0000000100100051CA07411101            F                    PARTICULATES
147840    0000000100100051CA07442602            F                    NITROGEN OXIDES
147840    0000000100100051CA07442401            F                    SULFUR DIOXIDE
147840    0000000100100051CA07443101            F                    HYDROCARBONS
147840    0000000100100051CA07442101            F                    CARBON MONOXIDE
147840    0000000200100011CA074RESIDENT BITUMINOUS COAL   000000101
147840    0000000200100051CA07411101            F                    PARTICULATES
147840    0000000200100051CA07442602            F                    NITROGEN OXIDES
147840    0000000200100051CA07442401            F                    SULFUR DIOXIDE
147840    0000000200100051CA07443101            F                    HYDROCARBONS
147840    0000000200100051CA07442101            F                    CARBON MONOXIDE
147840    0000000300100011CA074RESIDENT DISTILLATE OIL    000000137
147840    0000000300100051CA07411101            F                    PARTICULATES
147840    0000000300100051CA07442602            F                    NITROGEN OXIDES
147840    0000000300100051CA07442401            F                    SULFUR DIOXIDE
147840    0000000300100051CA07443101            F                    HYDROCARBONS
147840    0000000300100051CA07442101            F                    CARBON MONOXIDE
147840    0000000500100011CA074RESIDENTIAL NATURAL GAS    000000042
147840    0000000500100051CA07411101            F                    PARTICULATES
147840    0000000500100051CA07442602            F                    NITROGEN OXIDES
147840    0000000500100051CA07442401            F                    SULFUR DIOXIDE
147840    0000000500100051CA07443101            F                    HYDROCARBONS
147840    0000000500100051CA07442101            F                    CARBON MONOXIDE
147840    0000000800100011CA074COMM-INST BITUMINOUS COAL  000000003
147840    0000000800100051CA07411101            F                    PARTICULATES
147840    0000000800100051CA07442602            F                    NITROGEN OXIDES
147840    0000000800100051CA07442401            F                    SULFUR DIOXIDE
147840    0000000800100051CA07443101            F                    HYDROCARBONS
147840    0000000800100051CA07442101            F                    CARBON MONOXIDE
147840    0000000900100011CA074COMM-INST DISTILLATE OIL   000000023
147840    0000000900100051CA07411101            F                    PARTICULATES
147840    0000000900100051CA07442602            F                    NITROGEN OXIDES
147840    0000000900100051CA07442401            F                    SULFUR DIOXIDE
147840    0000000900100051CA07443101            F                    HYDROCARBONS
147840    0000000900100051CA07442101            F                    CARBON MONOXIDE
147840    0000001000100011CA074COMM-INST RESIDUAL OIL     000000031
147840    0000001000100051CA07411101            F                    PARTICULATES
147840    0000001000100051CA07442602            F                    NITROGEN OXIDES
147840    0000001000100051CA07442401            F                    SULFUR DIOXIDE
```

(Page 3 of 8)

Figure AST2-4 - continued. Sample Output

```
                    EIS/AS MASTER FILE INTERNAL TRANSACTION SORT PROGRAM  -  DIAGNOSTIC REPORT                    PAGE     1

PROGRAM NAME: CSRINTR (EC0050)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980


NUMBER OF INPUT TRANSACTIONS READ:                                   2,089
NUMBER OF TRANSACTIONS WRITTEN:                                      2,090
```

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Figure AST2-4 - continued.  Sample Output

```
                                     EMISSION FACTOR INSERTION PROGRAM                                          PAGE   1

PROGRAM NAME: CMSEFIN (EC0060)
REVISION LEVEL:  1-00
LAST UPDATE #:  A-1
DATE INCORPORATED:  FEBRUARY 1, 1980


OPTIONS IN EFFECT:  NOFLAGW

          FIELDS SELECTED FOR INSERTIONS:  NIT  SUL  ASH  EMISSION  CONF  SPEC

          FIELDS TO BE OVERRIDDEN:  NIT  SUL  ASH  EMISSION  CONF  SPEC


NITROGEN I  O  SULFUR I  O  ASH I  O  EMISSION FACTOR I  O  CONF LEVEL I  O  SPEC DATA I  O    DATE: CATEGORY   N    POLLUTANT   N


          *** CMSEFIN 009 CONDITIONAL - EMISSION FACTOR FILE CONTAINS FEDERAL CATEGORY RECORDS FOR CATEGORIES OTHER THAN 1-64


NUMBER OF INPUT TRANSACTIONS:                      2,090
NUMBER OF EMISSION FACTOR RECORDS READ:              387
NUMBER OF STATE AND LOCAL INSERTIONS MADE:             0
NUMBER OF FEDERAL INSERTIONS MADE:                 1,685
NUMBER OF OUTPUT TRANSACTIONS:                     2,090
```

(Page 5 of 8)

Figure AST2-4 - continued. Sample Output

```
                    EIS/AS MASTER FILE MAINTENANCE PROGRAM  -  DIAGNOSTIC MESSAGES                        PAGE     1

PROGRAM NAME: CFMMSTR (EC0070)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980

OPTION CARD

  CONTROL DATE IS 80   ,  ERROR OPTION IS FLAGW  ,  LIST OPTION IS LIST





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                 EIS/AS MASTER FILE MAINTENANCE PROGRAM  -  DIAGNOSTIC MESSAGES                       PAGE     2
NUMBER OF INPUT TRANSACTIONS READ:                                2,090
NUMBER OF DISASTERS DETECTED:                                         0
NUMBER OF ABORTS DETECTED:                                            0
NUMBER OF ERRORS DETECTED:                                            0
NUMBER OF CONDITIONALS DETECTED:                                      0
NUMBER OF WARNINGS DETECTED:                                          0
NUMBER OF TRANSACTIONS REJECTED:                                      0
NUMBER OF AREA SOURCE FILE RECORDS READ IN:                           0
NUMBER OF AREA SOURCE FILE RECORDS WRITTEN OUT:                     349
```

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Figure AST2-4 - continued. Sample Output

```
                    FIS/AS MASTER FILE MAINTENANCE PROGRAM  -  INTERNAL TRANSACTION LISTING                    PAGE     1

00000000000000000000000000000000000000000000000000000000000000000000000000000000
147840    0000000000000011CG07475
147840    0000000000000031CG074                         06380311093093
147840    0000000000000051CG07400197000300100001500055
147840    0000000000000061CG07416000567100081000826
147840    0000000000000061CG0742                          003098      0005303
147840    0000000000000071CG07442101CARBON MONOXIDEU
147840    0000000000000071CG07442401SULFUR DIOXIDE U       43101HYDROCARBONS   U
147840    0000000000000071CG07411101PARTICULATES   U       42602NITROGEN OXIDESU
147840    000000000000200001 N074WABASH
147840    0000000100100011CA074RESIDENT ANTHRACITE COAL   000000001
147840    0000000100100041CA0740A7 EMISSION RECORDED             FFED
147840    0000000100100051CA0741110100000100000F           0000300PARTICULATES
147840    0000000100100051CA0741110100000100000F                  PARTICULATES
147840    0000000100100051CA0744210100000900000F                  CARBON MONOXIDE
147840    0000000100100051CA0744210100000900000F           0004000CARBON MONOXIDE
147840    0000000100100051CA0744240100000380000F           0000020SULFUR DIOXIDE
147840    0000000100100051CA0744240100000380000F                  SULFUR DIOXIDE
147840    0000000100100051CA0744260200000030000F                  NITROGEN OXIDES
147840    0000000100100051CA0744260200000030000F           0000150NITROGEN OXIDES
147840    0000000100100051CA07443101           F 0200000SUS0000250HYDROCARBONS
147840    0000000100100051CA07443101           F 0200000SUS       HYDROCARBONS
147840    0000000200100011CA074RESIDENT BITUMINOUS COAL   000000101
147840    0000000200100051CA0741110100000200000F                  PARTICULATES
147840    0000000200100051CA0744210100000900000F                  CARBON MONOXIDE
147840    0000000200100051CA0744240100000380000F                  SULFUR DIOXIDE
147840    0000000200100051CA0744260200000030000F                  NITROGEN OXIDES
147840    0000000200100051CA07443101           F 0025000SUS       HYDROCARBONS
147840    0000000300100011CA074RESIDENT DISTILLATE OIL     000000137
147840    0000000300100051CA0741110100000025000F                  PARTICULATES
147840    0000000300100051CA0744210100000050000F                  CARBON MONOXIDE
147840    0000000300100051CA0744240100001440000F                  SULFUR DIOXIDE
147840    0000000300100051CA0744260200000180000F                  NITROGEN OXIDES
147840    0000000300100051CA07443101           F 0169000SUS       HYDROCARBONS
147840    0000000500100011CA074RESIDENTIAL NATURAL GAS     000000042
147840    0000000500100041CA0740A7 EMISSION RECORDED             FFED
147840    0000000500100051CA0741110100000100000F           0000300PARTICULATES
147840    0000000500100051CA0741110100000100000F                  PARTICULATES
147840    0000000500100051CA0744210100000200000F                  CARBON MONOXIDE
147840    0000000500100051CA0744210100000200000F           0004000CARBON MONOXIDE
147840    0000000500100051CA0744240100000060000F           0000020SULFUR DIOXIDE
147840    0000000500100051CA0744240100000060000F                  SULFUR DIOXIDE
147840    0000000500100051CA0744260200000800000F                  NITROGEN OXIDES
147840    0000000500100051CA0744260200000800000F           0000150NITROGEN OXIDES
147840    0000000500100051CA07443101           F 0250000SUS0000250HYDROCARBONS
147840    0000000500100051CA07443101           F 0250000SUS       HYDROCARBONS
147840    0000000800100011CA074COMM-INST BITUMINOUS COAL   000000003
```

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Figure AST2-4 - continued. Sample Output

```
                    EIS/AS MASTER FILE MAINTENANCE PROGRAM  -  NEW MASTER FILE LISTING                        PAGE     1

147840     000000000000000565074CG75
147840     00000000002000136074 NWABASH
147840     000000010010000604074CARESIDENT ANTHRACITE COAL   000000001
147840     000000020010000604074CARESIDENT BITUMINOUS COAL   000000101
147840     000000030010000604074CARESIDENT DISTILLATE OIL    000000137
147840     000000050010000604074CARESIDENTIAL NATURAL GAS    000000042
147840     000000080010000604074CACOMM-INST BITUMINOUS COAL  000000003
147840     000000090010000604074CACOMM-INST DISTILLATE OIL   000000023
147840     000000100010000604074CACOMM-INST RESIDUAL OIL     000000031
147840     000000110010000604074CACOMM-INST NATURAL GAS      000000012
147840     000000140010000604074CAINDUSTRY BITUMINOUS COAL   000000037
147840     000000160010000604074CAINDUSTRIAL DISTILLATE OIL  000000011
147840     000000170010000604074CAINDUSTRIAL RESIDUAL OIL    000000030
147840     000000180010000604074CAINDUSTRIAL NATURAL GAS     000000007
147840     000000210010000604074CARES. ON-SITE INCINERATION  000000947
147840     000000270010000604074CALT DUTY GAS VEH LM ACC RD
147840     000000280010000604074CALT DUTY GAS VEH RURAL RD
147840     000000290010000604074CALT DUTY GAS VEH SUBURB RD
147840     000000300010000604074CALT DUTY GAS VEH URBAN RD
147840     000000310010000604074CAMED DUTY GAS VEH LM AC RD
147840     000000320010000604074CAMED DUTY GAS VEH RURAL RD
147840     000000330010000604074CAMED DUTY GAS VEH SUBUR RD
147840     000000340010000604074CAMED DUTY GAS VEH URBAN RD
147840     000000350010000604074CAHVY DUTY GAS VEH LM AC RD
147840     000000360010000604074CAHVY DUTY GAS VEH RURAL RD
147840     000000370010000604074CAHVY DUTY GAS VEH SUBUR RD
147840     000000380010000604074CAHVY DUTY GAS VEH URBAN RD
147840     000000390010000604074CAOFF HIGHWAY GAS VEHICLES    000000652
147840     000000400010000604074CAHVY DUTY DIESEL VEH LACRD
147840     000000410010000604074CAHVY DUTY DIESEL VEH RURRD
147840     000000420010000604074CAHVY DUTY DIESEL VEH SUBRD
147840     000000430010000604074CAHVY DUTY DIESEL VEH URBRD
147840     000000440010000604074CAOFF HIGHWAY DIESEL VEH       000000001
147840     000000450010000604074CARAILROAD LOCOMOTIVES         000000121
147840     000000470010000604074CACIVIL AIRCRAFT LTO'S         000000365
147840     000000490010000604074CA
147840     000000520010000604074CAGASOLINE VESSELS             000000267
147840     000000530010000604074CASOLVENT PURCHASED            000000525
147840     000000540010000604074CAGASOLINE MARKETED            000000089
147840     000000550010000604074CAUNPAVED ROAD TRAVEL          000000005
147840     000000570010000604074CACONSTRUCTION                 000000087
147840     000000580010000604074CAMISC WIND EROSION            000000099
147840     000000590010000604074CALAND TILLING                 000000224
147840     000000600010000604074CAFOREST WILD FIRES                      0000012
147840     000000640010000604074CASTRUCTURAL FIRES             000000052
147860     000000000000000565065CG75
147860     00000000002000136065 NWARREN
```

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Figure AST2-4 - continued.  Sample Output

## EIS/AS Test 3

### Update the Master File Using EIS/AS Transactions

In this test run, the EIS/AS master file created in Test 2 is updated with EIS/AS transactions using the cataloged procedure ECEMM10 which executes CEDMSTR (EC0040), the master file transaction edit program; CSRINTR (EC0050), the master file internal transaction sort program; CMSEFIN (EC0060), the master file internal transaction emission factor insertion program; and CFMMSTR (EC0070), the master file maintenance program.

CEDMSTR (EC0040) edits EIS/AS master file transactions and converts those that pass the edit criteria into internal transactions.

There are four types of input EIS/AS master file transactions: description, category, NEDS comment, and EIS/AS comment. See Figure AST3-1 for the EIS/AS master file transaction formats and Figure AST3-2 for the master file transaction load sheets. Description transactions are used to add, change, or delete description records for counties or suballocations of counties. Category transactions are used to add, change, or delete aggregate or disaggregate category records for counties or suballocations of counties. EIS/AS comment transactions are used to add, change, or delete EIS/AS comment records.

To add a description record (either county or suballocation) to the master file, the user enters at least one of the seven description transactions. Note that a county description record must be present in the input transaction file or input master file before any other records (including the suballocation description record) will be accepted for that county. A category record (or category disaggregation record) can be added by entering at least one of the five category transactions, provided that a description record is present in the input transaction file or input master file for the same geographic area. In order to add a comment record, the user enters one or more of the EIS/AS comment transactions. However, comment records will only be added if there is a record in the master file (description or category) with matching key information, including state, county, geographic suballocation number, category number, and category disaggregation number.

To change a non-key field in a master file record, the user enters the appropriate transaction; i.e., a description 1 through 7, category 1 through 5, NEDS comment or EIS/AS comment transaction, with the same key information as the master file record to be changed. Also, this transaction must have an action code of 'C' and contain the new information for the field to be changed. If these requirements are met, the non-blank, non-key fields of the transaction will replace the corresponding fields in the master file record. A change transaction with an asterisk in the first position of an optional (or non-key) field will cause that field in the master file to be flagged for deletion and change the first character in the field to an asterisk.

Similarly, the deletion of a master file record requires that the user enter a transaction with the same key information as the master file record to be deleted. However, the transaction must also have an action code of 'D' and the remaining fields should contain blanks. It should be noted that the records are flagged for deletion as a result of this test run but are not actually deleted. When a record is flagged for deletion, all its subordinate records are also flagged for deletion.

The options in this program are used to determine if the year in the description 1 transaction is valid, if the warning messages are to be printed in the diagnostic report, and if the input EIS/AS transactions and the output internal transactions should be printed. A two-digit year must be specified in card columns 1 and 2 of the option card in order to edit the year field in the description 1 transaction (the year on the transaction must not be greater than the year on the option card). If the warning messages are to be printed in the diagnostic report, the word FLAGW must appear in card columns 4 through 8. If the FLAGW option is not specified, the default, NOFLAGW, will be in effect and the warning messages will not be printed. In order for the input transactions and the output internal transactions to be printed, the word LIST must appear in card columns 12 through 15 of the option card; otherwise, the default, NOLIST, will be in effect and the listings will not be produced.

The programs CSRINTR (EC0050), CMSEFIN (EC0060) and CFMMSTR (EC0070) were used in Test 2 to create an EIS/AS master file from NEDS area source transactions. For a description of these programs refer to Test 2.

The run stream for this test run contains the JCL necessary for updating the EIS/AS master file. This run stream is shown in Figure AST3-3. It does not show all the input master file transactions in the run stream, but it does show the necessary JCL.

The cataloged procedure executed by this run stream is ECEMM10. Through the use of substitutable parameters, the input emission factor file is specified as ECEMFL1 (created in Test 1), the input master file is specified as ECMSTR1 (created in Test 2), and the updated master file is named ECMSTR2. For the EDIT step, the user must supply the DD (data definition) information for the option card file and the input EIS/AS master file transaction file. The options specified for the EDIT step are 80, FLAGW, and LIST. Also, the user must supply the DD information for the option card file in the INSERT step and the option card file in the UPDATE step. The options specified for the INSERT step in this test run are: FLAGW, NIT I, SUL I, ASH I, EMISSION I, CONF I, SPEC I, CDAT 77001, and PDAT 77001. The options specified for the UPDATE step are 80 and FLAGW. Figure AST3-4 shows the sample output produced by this run stream.

Category 1 Transaction

| Column # | Field Length | Data Type | Description |
|---|---|---|---|
| 1 - 2 | 2 | Numeric | State |
| 3 - 6 | 4 | Numeric | County |
| 7 - 9 | 3 | Numeric | AQCR |
| 10 - 14 | 5 | Numeric | Geographic Suballocation Number |
| 15 - 17 | 3 | Numeric | Category Number |
| 18 - 19 | 2 | Numeric | Category Disaggregation Number |
| 20 - 44 | 25 | Alphanumeric | Category Description |
| 45 - 46 | 2 | Numeric | Year of Information |
| 47 - 55 | 9 | Numeric | Process Rate |
| 56 - 62 | 7 | Numeric | Category Adjustment Value |
| 63 - 64 | 2 | Numeric | Units Code |
| 65 - 76 | 12 | Alphanumeric | Units Code Description |
| 77 | 1 | Alphabetic | Suballocation Type |
| 78 | 1 | Alphabetic | Disaggregation Type |
| 79 | 1 | Numeric | Card Number |
| 80 | 1 | Alphabetic | Action Code |

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Figure AST3-1. EIS/AS Master File Transaction Formats

## Category 2 Transaction

| Column # | Field Length | Data Type | Description |
|---|---|---|---|
| 1 - 2 | 2 | Numeric | State |
| 3 - 6 | 4 | Numeric | County |
| 7 - 9 | 3 | Numeric | AQCR |
| 10 - 14 | 5 | Numeric | Geographic Suballocation Number |
| 15 - 17 | 3 | Numeric | Category Number |
| 18 - 19 | 2 | Numeric | Category Disaggregation Number |
| 20 | 1 | Alphabetic | Uniform Monthly Thruput |
| 21 - 22 | 2 | Numeric | Thruput for January |
| 23 - 24 | 2 | Numeric | Thruput for February |
| 25 - 26 | 2 | Numeric | Thruput for March |
| 27 - 28 | 2 | Numeric | Thruput for April |
| 29 - 30 | 2 | Numeric | Thruput for May |
| 31 - 32 | 2 | Numeric | Thruput for June |
| 33 - 34 | 2 | Numeric | Thruput for July |
| 35 - 36 | 2 | Numeric | Thruput for August |
| 37 - 38 | 2 | Numeric | Thruput for September |
| 39 - 40 | 2 | Numeric | Thruput for October |
| 41 - 42 | 2 | Numeric | Thruput for November |
| 43 - 44 | 2 | Numeric | Thruput for December |
| 45 - 46 | 2 | Numeric | Hours Per Day |
| 47 | 1 | Numeric | Days Per Week |
| 48 - 49 | 2 | Numeric | Weeks Per Year |
| 50 - 53 | 4* | Numeric | Thruput Ratio |

---

*A one-digit decimal position is assumed; e.g., 21.2 would be coded as '0212'.

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Figure AST3-1 - continued. EIS/AS Master File Transaction Formats

Category 2 Transaction (continued)

| Column # | Field Length | Data Type | Description |
|---|---|---|---|
| 54 - 63 | 10* | Numeric | Maximum Hourly Thruput |
| 64 | 1 | Numeric | Data Confidence Rating |
| 65 - 67 | 3** | Numeric | Nitrogen Percentage |
| 68 - 69 | 2*** | Numeric | Sulfur Percentage |
| 70 - 72 | 3**** | Numeric | Ash Percentage |
| 73 - 76 | 4 | Alphanumeric | Heat Content |
| 77 | 1 | Alphabetic | Suballocation Type |
| 78 | 1 | Alphabetic | Disaggregation Type |
| 79 | 1 | Numeric | Card Number |
| 80 | 1 | Alphabetic | Action Code |

---

*A three-digit decimal position is assumed; e.g., 350.0 would be coded as '0000350000'.

**A three-digit decimal position is assumed; e.g., 0.02 would be coded as '020'.

***A one-digit decimal position is assumed; e.g., 1.3 would be coded as '13'.

****A one-digit decimal position is assumed; e.g., 7.3 would be coded as '073'.

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Figure AST3-1 - continued. EIS/AS Master File Transaction Formats

Category 3 Transaction

| Column # | Field Length | Data Type | Description |
|---|---|---|---|
| 1 - 2 | 2 | Numeric | State |
| 3 - 6 | 4 | Numeric | County |
| 7 - 9 | 3 | Numeric | AQCR |
| 10 - 14 | 5 | Numeric | Geographic Suballocation Number |
| 15 - 17 | 3 | Numeric | Category Number |
| 18 - 19 | 2 | Numeric | Category Disaggregation Number |
| 20 | 1 | Alphabetic | Uniform Hourly Thruput |
| 21 - 22 | 2 | Numeric | Thruput for Hour Beginning 0000 |
| 23 - 24 | 2 | Numeric | Thruput for Hour Beginning 0100 |
| 25 - 26 | 2 | Numeric | Thruput for Hour Beginning 0200 |
| 27 - 28 | 2 | Numeric | Thruput for Hour Beginning 0300 |
| 29 - 30 | 2 | Numeric | Thruput for Hour Beginning 0400 |
| 31 - 32 | 2 | Numeric | Thruput for Hour Beginning 0500 |
| 33 - 34 | 2 | Numeric | Thruput for Hour Beginning 0600 |
| 35 - 36 | 2 | Numeric | Thruput for Hour Beginning 0700 |
| 37 - 38 | 2 | Numeric | Thruput for Hour Beginning 0800 |
| 39 - 40 | 2 | Numeric | Thruput for Hour Beginning 0900 |
| 41 - 42 | 2 | Numeric | Thruput for Hour Beginning 1000 |
| 43 - 44 | 2 | Numeric | Thruput for Hour Beginning 1100 |
| 45 - 46 | 2 | Numeric | Thruput for Hour Beginning 1200 |
| 47 - 48 | 2 | Numeric | Thruput for Hour Beginning 1300 |
| 49 - 50 | 2 | Numeric | Thruput for Hour Beginning 1400 |
| 51 - 52 | 2 | Numeric | Thruput for Hour Beginning 1500 |

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Figure AST3-1 - continued. EIS/AS Master File Transaction Formats

Category 3 Transaction (continued)

| Column # | Field Length | Data Type | Description |
|---|---|---|---|
| 53 - 54 | 2 | Numeric | Thruput for Hour Beginning 1600 |
| 55 - 56 | 2 | Numeric | Thruput for Hour Beginning 1700 |
| 57 - 58 | 2 | Numeric | Thruput for Hour Beginning 1800 |
| 59 - 60 | 2 | Numeric | Thruput for Hour Beginning 1900 |
| 61 - 62 | 2 | Numeric | Thruput for Hour Beginning 2000 |
| 63 - 64 | 2 | Numeric | Thruput for Hour Beginning 2100 |
| 65 - 66 | 2 | Numeric | Thruput for Hour Beginning 2200 |
| 67 - 68 | 2 | Numeric | Thruput for Hour Beginning 2300 |
| 69 - 76 | 8 | | Unused |
| 77 | 1 | Alphabetic | Suballocation Type |
| 78 | 1 | Alphabetic | Disaggregation Type |
| 79 | 1 | Numeric | Card Number |
| 80 | 1 | Alphabetic | Action Code |

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Figure AST3-1 - continued. EIS/AS Master File Transaction Formats

Category 4 Transaction

| Column # | Field Length | Data Type | Description |
|---|---|---|---|
| 1 - 2 | 2 | Numeric | State |
| 3 - 6 | 4 | Numeric | County |
| 7 - 9 | 3 | Numeric | AQCR |
| 10 - 14 | 5 | Numeric | Geographic Suballocation Number |
| 15 - 17 | 3 | Numeric | Category Number |
| 18 - 19 | 2 | Numeric | Category Disaggregation Number |
| 20 - 53 | 34 | Alphanumeric | NEDS A7 Comment |
| 54 | 1 | Alphanumeric | Information Source Code |
| 55 - 74 | 20 | Alphanumeric | Information Source Narrative |
| 75 - 76 | 2 |  | Unused |
| 77 | 1 | Alphabetic | Suballocation Type |
| 78 | 1 | Alphabetic | Disaggregation Type |
| 79 | 1 | Numeric | Card Number |
| 80 | 1 | Alphabetic | Action Code |

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Figure AST3-1 - continued. EIS/AS Master File Transaction Formats

Category 5 Transaction

| Column # | Field Length | Data Type | Description |
|---|---|---|---|
| 1 - 2 | 2 | Numeric | State |
| 3 - 6 | 4 | Numeric | County |
| 7 - 9 | 3 | Numeric | AQCR |
| 10 - 14 | 5 | Numeric | Geographic Suballocation Number |
| 15 - 17 | 3 | Numeric | Category Number |
| 18 - 19 | 2 | Numeric | Category Disaggregation Number |
| 20 - 24 | 5 | Numeric | Pollutant ID |
| 25 - 34 | 10* | Numeric | Emission Factor |
| 35 | 1 | Numeric | Emission Factor Confidence Rating |
| 36 | 1 | Alphabetic | Emission Factor Origin |
| 37 | 1 | Alphanumeric | Emission Factor Source Code |
| 38 - 47 | 10 | Alphanumeric | Pollutant-Specific Data |
| 48 - 54 | 7 | Numeric | NEDS A7 Emission |
| 55 - 69 | 15 | Alphanumeric | Pollutant Name |
| 70 - 76 | 7 |  | Unused |
| 77 | 1 | Alphabetic | Suballocation Type |
| 78 | 1 | Alphabetic | Disaggregation Type |
| 79 | 1 | Numeric | Card Number |
| 80 | 1 | Alphabetic | Action Code |

---

*A three-digit decimal position is assumed; e.g., 10.35 would be coded as '0000010350'.

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Figure AST3-1 - continued. EIS/AS Master File Transaction Formats

Description 1 Transaction

| Column # | Field Length | Data Type | Description |
|---|---|---|---|
| 1 - 2 | 2 | Numeric | State |
| 3 - 6 | 4 | Numeric | County |
| 7 - 9 | 3 | Numeric | AQCR |
| 10 - 14 | 5 | Numeric | Geographic Suballocation Number |
| 15 - 16 | 2 | Numeric | Year |
| 17 - 19 | 3 | Numeric | Day |
| 20 - 22 | 3 | Numeric | Air Basin |
| 23 - 26 | 4 | Numeric | SMSA |
| 27 - 46 | 20 | Alphanumeric | Area Name |
| 47 - 66 | 20 | Alphanumeric | Major Activity |
| 67 - 70 | 4 | Alphanumeric | Associated Plant ID |
| 71 - 72 | 2 | Numeric | SIP Base Year |
| 73 - 74 | 2 | Numeric | Projected Year |
| 75 - 76 | 2 | Numeric | Rural Population Percentage |
| 77 | 1 | Alphabetic | Suballocation Type |
| 78 | 1 | Alphabetic | G Code |
| 79 | 1 | Numeric | Card Number |
| 80 | 1 | Alphabetic | Action Code |

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Figure AST3-1 - continued. EIS/AS Master File Transaction Formats

## Description 2 Transaction

| Column # | Field Length | Data Type | Description |
|---|---|---|---|
| 1 - 2 | 2 | Numeric | State |
| 3 - 6 | 4 | Numeric | County |
| 7 - 9 | 3 | Numeric | AQCR |
| 10 - 14 | 5 | Numeric | Geographic Suballocation Number |
| 15 - 22 | 8 | Numeric | Population |
| 23 - 76 | 54 | Alphanumeric | AQCR Name |
| 77 | 1 | Alphabetic | Suballocation Type |
| 78 | 1 | Alphabetic | G Code |
| 79 | 1 | Numeric | Card Number |
| 80 | 1 | Alphabetic | Action Code |

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Figure AST3-1 - continued. EIS/AS Master File Transaction Formats

Description 3 Transaction

| Column # | Field Length | Data Type | Description |
|---|---|---|---|
| 1 - 2 | 2 | Numeric | State |
| 3 - 6 | 4 | Numeric | County |
| 7 - 9 | 3 | Numeric | AQCR |
| 10 - 14 | 5 | Numeric | Geographic Suballocation Number |
| 15 - 16 | 2 | Numeric | Suballocation Technique Code |
| 17 - 36 | 20 | Alphanumeric | Suballocation Technique Description |
| 37 - 39 | 3 | Numeric | Defined Area Code |
| 40 - 41 | 2* | Numeric | Sulfur Content - Anthracite Coal |
| 42 - 43 | 2* | Numeric | Sulfur Content - Bituminous Coal |
| 44 - 45 | 2* | Numeric | Sulfur Content - Distillate Oil |
| 46 - 47 | 2* | Numeric | Sulfur Content - Residual Oil |
| 48 - 50 | 3** | Numeric | Ash Content - Anthracite Coal |
| 51 - 53 | 3** | Numeric | Ash Content - Bituminous Coal |
| 54 - 55 | 2 | Numeric | UTM Zone 1 |

---

*A one-digit decimal position is assumed; e.g., 1.5 would be coded as '15'.

**A one-digit decimal position is assumed; e.g., 7.3 would be coded as '073'.

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Figure AST3-1 - continued. EIS/AS Master File Transaction Formats

Description 3 Transaction (continued)

| Column # | Field Length | Data Type | Description |
|---|---|---|---|
| 56 - 59 | 4* | Numeric | UTM Horizontal 1 |
| 60 - 64 | 5** | Numeric | UTM Vertical 1 |
| 65 - 66 | 2 | Numeric | UTM Zone 2 |
| 67 - 70 | 4* | Numeric | UTM Horizontal 2 |
| 71 - 75 | 5** | Numeric | UTM Vertical 2 |
| 76 | 1 | | Unused |
| 77 | 1 | Alphabetic | Suballocation Type |
| 78 | 1 | Alphabetic | G Code |
| 79 | 1 | Numeric | Card Number |
| 80 | 1 | Alphabetic | Action Code |

---

*A one-digit decimal position is assumed; e.g., 67.0 would be coded as '0670'.

**A one-digit decimal position is assumed; e.g., 4762.4 would be coded as '47624'.

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Figure AST3-1 - continued. EIS/AS Master File Transaction Formats

## Description 4 Transaction

| Column # | Field Length | Data Type | Description |
|---|---|---|---|
| 1 - 2 | 2 | Numeric | State |
| 3 - 6 | 4 | Numeric | County |
| 7 - 9 | 3 | Numeric | AQCR |
| 10 - 14 | 5 | Numeric | Geographic Suballocation Number |
| 15 - 16 | 2 | Numeric | UTM Zone 3 |
| 17 - 20 | 4* | Numeric | UTM Horizontal 3 |
| 21 - 25 | 5** | Numeric | UTM Vertical 3 |
| 26 - 27 | 2 | Numeric | UTM Zone 4 |
| 28 - 31 | 4* | Numeric | UTM Horizontal 4 |
| 32 - 36 | 5** | Numeric | UTM Vertical 4 |
| 37 - 38 | 2 | Numeric | UTM Zone 5 |
| 39 - 42 | 4* | Numeric | UTM Horizontal 5 |
| 43 - 47 | 5** | Numeric | UTM Vertical 5 |
| 48 - 49 | 2 | Numeric | UTM Zone 6 |
| 50 - 53 | 4* | Numeric | UTM Horizontal 6 |
| 54 - 58 | 5** | Numeric | UTM Vertical 6 |
| 59 | 1 | Alphanumeric | Source Type |
| 60 - 66 | 7*** | Numeric | Length or Area |

---

*A one-digit decimal position is assumed; e.g., 67.0 would be coded as '0670'.

**A one-digit decimal position is assumed; e.g., 4762.4 would be coded as '47624'.

***A two-digit decimal position is assumed; e.g., 193.4 would be coded as '0019340'.

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Figure AST3-1 - continued. EIS/AS Master File Transaction Formats

Description 4 Transaction (continued)

| Column # | Field Length | Data Type | Description |
|---|---|---|---|
| 67 - 68 | 2 | Numeric | Length or Area Units Code |
| 69 - 76 | 8 | | Unused |
| 77 | 1 | Alphabetic | Suballocation Type |
| 78 | 1 | Alphabetic | G Code |
| 79 | 1 | Numeric | Card Number |
| 80 | 1 | Alphabetic | Action Code |

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Figure AST3-1 - continued. EIS/AS Master File Transaction Formats

Description 5 Transaction

| Column # | Field Length | Data Type | Description |
|---|---|---|---|
| 1 - 2 | 2 | Numeric | State |
| 3 - 6 | 4 | Numeric | County |
| 7 - 9 | 3 | Numeric | AQCR |
| 10 - 14 | 5 | Numeric | Geographic Suballocation Number |
| 15 - 19 | 5 | Numeric | SIP Estimate for TSP |
| 20 - 23 | 4 | Numeric | SIP Estimate for $SO_2$ |
| 24 - 27 | 4 | Numeric | SIP Estimate for $NO_X$ |
| 28 - 32 | 5 | Numeric | SIP Estimate for HC |
| 33 - 37 | 5 | Numeric | SIP Estimate for CO |
| 38 - 76 | 39 | | Unused |
| 77 | 1 | Alphabetic | Suballocation Type |
| 78 | 1 | Alphabetic | G Code |
| 79 | 1 | Numeric | Card Number |
| 80 | 1 | Alphabetic | Action Code |

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Figure AST3-1 - continued. EIS/AS Master File Transaction Formats

Description 6 Transaction

| Column # | Field Length | Data Type | Description |
|---|---|---|---|
| 1 - 2 | 2 | Numeric | State |
| 3 - 6 | 4 | Numeric | County |
| 7 - 9 | 3 | Numeric | AQCR |
| 10 - 14 | 5 | Numeric | Geographic Suballocation Number |
| 15 | 1 | Numeric | Subcard Number |
| 16 | 1 | Numeric | Population Code |
| 17 - 23 | 7 | Numeric | Gas Fuel for Light Vehicles |
| 24 - 29 | 6 | Numeric | Gas Fuel for Heavy Vehicles |
| 30 - 35 | 6 | Numeric | Diesel Fuel for Heavy Vehicles |
| 36 - 41 | 6 | Numeric | Vehicle Miles for Limited Access Roads |
| 42 - 47 | 6 | Numeric | Vehicle Miles for Rural Roads |
| 48 - 53 | 6 | Numeric | Vehicle Miles for Suburban Roads |
| 54 - 60 | 7 | Numeric | Vehicle Miles for Urban Roads |
| 61 - 76 | 16 | | Unused |
| 77 | 1 | Alphabetic | Suballocation Type |
| 78 | 1 | Alphabetic | G Code |
| 79 | 1 | Numeric | Card Type |
| 80 | 1 | Alphabetic | Action Code |

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Figure AST3-1 - continued. EIS/AS Master File Transaction Formats

## Description 7 Transaction

| Column # | Field Length | Data Type | Description |
|---|---|---|---|
| 1 - 2 | 2 | Numeric | State |
| 3 - 6 | 4 | Numeric | County |
| 7 - 9 | 3 | Numeric | AQCR |
| 10 - 14 | 5 | Numeric | Geographic Suballocation Number |
| 15 - 19 | 5 | Numeric | Pollutant ID |
| 20 - 34 | 15 | Alphanumeric | Pollutant Name |
| 35 | 1 | Alphabetic | Attainment Status |
| 36 - 41 | 6 | Alphanumeric | AQMA Number |
| 42 | 1 | | Unused |
| 43 - 69 | 27 | | Repeat Columns 15-41 |
| 70 - 76 | 7 | | Unused |
| 77 | 1 | Alphabetic | Suballocation Type |
| 78 | 1 | Alphabetic | G Code |
| 79 | 1 | Numeric | Card Number |
| 80 | 1 | Alphabetic | Action Code |

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Figure AST3-1 - continued. EIS/AS Master File Transaction Formats

## NEDS Comment Transaction

| Column # | Field Length | Data Type | Description |
|---|---|---|---|
| 1 - 2 | 2 | Numeric | State |
| 3 - 6 | 4 | Numeric | County |
| 7 - 9 | 3 | Numeric | AQCR |
| 10 - 77 | 68 | Alphanumeric | NEDS A6 Comment |
| 78 | 1 | Alphabetic | N Code |
| 79 | 1 | Numeric | Card Type |
| 80 | 1 | Alphabetic | Action Code |

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Figure AST3-1 - continued. EIS/AS Master File Transaction Formats

EIS/AS Comment Transaction

| Column # | Field Length | Data Type | Description |
|---|---|---|---|
| 1 - 2 | 2 | Numeric | State |
| 3 - 6 | 4 | Numeric | County |
| 7 - 9 | 3 | Numeric | AQCR |
| 10 - 14 | 5 | Numeric | Geographic Suballocation Number |
| 15 - 17 | 3 | Numeric | Category Number |
| 18 - 19 | 2 | Numeric | Category Disaggregation Number |
| 20 - 22 | 3 | Numeric | Line Number |
| 23 - 72 | 50 | Alphanumeric | Half Comment |
| 73 - 77 | 5 | | Unused |
| 78 | 1 | Alphabetic | R Code |
| 79 | 1 | Numeric | Card Number |
| 80 | 1 | Alphabetic | Action Code |

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Figure AST3-1 - continued. EIS/AS Master File Transaction Formats

AGENCY ____________

# EMISSIONS INVENTORY SYSTEM/AREA SOURCE (EIS/AS)
# COMPREHENSIVE DATA HANDLING SYSTEM (CDHS)
## DESCRIPTION TRANSACTIONS 1-6

BY ____________
DATE ____________
PAGE ___ OF ______

| STATE | COUNTY | AQCR | SUBALLOC NBR |
|---|---|---|---|
| 1 | 3 | 7 | 10 14 |
| | | | |

| DATE | | AIR BASIN | SMSA | GEOGRAPHIC NAME | MAJOR ACTIVITY | ASSOC PLANT ID | SIP BASE YR | PROJ YR | % RUR | C/S | | NBR | ACTION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| YR | DAY | | | | | | | | | | | | |
| 15 | 17 | 20 | 23 | 27 | 47 | 67 | 71 | 73 | 75 | 77 | 78 | 79 | 80 |
| | | | | | | | | | | | G | 1 | |

| POPULATION | AQCR NAME | C/S | | NBR | ACTION |
|---|---|---|---|---|---|
| 15 | 23 | 77 | 78 | 79 | 80 |
| | | | G | 2 | |

| SUB TECH | SUBALLOCATION TECHNIQUE DESCRIPTION | DEF AREA CODE | SULFUR CONTENTS | | | | ASH CONTENTS | | UTM COORDINATES | | | | | | C/S | | NBR | ACTION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | ANTH COAL | BITM COAL | DIST OIL | RESID OIL | ANTH COAL | BITUM COAL | ZONE 1 | HORIZ 1 | VERT 1 | ZONE 2 | HORIZ 2 | VERT 2 | | | | |
| 15 | 17 | 37 | 40 | 42 | 44 | 46 | 48 | 51 | 54 | 56 | 60 | 65 | 67 | 71 | 77 | 78 | 79 | 80 |
| | | | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | | ▲ | ▲ | | ▲ | ▲ | | G | 3 | |

| UTM COORDINATES | | | | | | | | | | | | SOURCE | LENGTH OF LINE, LINK, OR AREA | LLA UNITS CODE | | C/S | | NBR | ACTION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ZONE 3 | HORIZ 3 | VERT 3 | ZONE 4 | HORIZ 4 | VERT 4 | ZONE 5 | HORIZ 5 | VERT 5 | ZONE 6 | HORIZ 6 | VERT 6 | | | | | | | | |
| 15 | 17 | 21 | 26 | 28 | 32 | 37 | 39 | 43 | 48 | 50 | 54 | 59 | 60 | 67 | | 77 | 78 | 79 | 80 |
| | ▲ | ▲ | | ▲ | ▲ | | ▲ | ▲ | | ▲ | ▲ | | ▲ | | | | G | 4 | |

| SIP ESTIMATES | | | | | | C/S | | NBR | ACTION |
|---|---|---|---|---|---|---|---|---|---|
| TSP | SO2 | NOX | HC | CO | | | | | |
| 15 | 20 | 24 | 28 | 33 | 37 | 77 | 78 | 79 | 80 |
| | | | | | | | G | 5 | |

| SUB ID | POP ID | LIGHT VEHICLE GAS | HEAVY VEHICLE GAS | HEAVY VEHICLE DIESEL | LIMITED ACCESS ROADS/MVM | RURAL ROADS MVM | SUBURBAN ROADS/MVM | URBAN ROADS MVM | | C/S | | NBR | ACTION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 15 | 16 | 17 | 24 | 30 | 36 | 42 | 48 | 54 | 60 | 77 | 78 | 79 | 80 |
| | | | | | | | | | | | G | 6 | |

(Page 1 of 5)

Figure AST3-2. EIS/AS Master File Transaction Load Sheets

AGENCY__________

EMISSIONS INVENTORY S   EM/AREA SOURCE (EIS/AS)
COMPREHENSIVE DATA HANDLING SYSTEM (CDHS)
DESCRIPTION TRANSACTION 7

BY __________
DATE __________
PAGE ____ OF __________

| STATE | COUNTY | AQCR | SUBALLOC NBR |
|---|---|---|---|
| 1 | 3 | 7 | 10 14 |
| | | | |

| POLLUTANT ID | POLLUTANT NAME | ATTN | AQMA NUMBER | | POLLUTANT ID | POLLUTANT NAME | ATTN | AQMA NUMBER | | C/S | | NBR | ACTION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 15 | 20 | 35 | 36 41 | | 43 | 48 | 63 | 64 69 | | 77 | 78 | 79 | 80 |
| | | | | | | | | | | | G | 7 | |
| | | | | | | | | | | | G | 7 | |
| | | | | | | | | | | | G | 7 | |
| | | | | | | | | | | | G | 7 | |
| | | | | | | | | | | | G | 7 | |
| | | | | | | | | | | | G | 7 | |
| | | | | | | | | | | | G | 7 | |
| | | | | | | | | | | | G | 7 | |
| | | | | | | | | | | | G | 7 | |
| | | | | | | | | | | | G | 7 | |
| | | | | | | | | | | | G | 7 | |
| | | | | | | | | | | | G | 7 | |
| | | | | | | | | | | | G | 7 | |
| | | | | | | | | | | | G | 7 | |
| | | | | | | | | | | | G | 7 | |

(Page 2 of 5)

Figure AST3-2 - continued. EIS/AS Master File Transaction Load Sheets

AGENCY ______________

## EMISSIONS INVENTORY SYSTEM/AREA SOURCE (EIS/AS)
## COMPREHENSIVE DATA HANDLING SYSTEM (CDHS)
## CATEGORY TRANSACTIONS

BY ______________
DATE ______________
PAGE ____ OF ______________

| STATE | COUNTY | AQCR | SUBALLOC NBR | CATEG NBR | DISAG NBR |
|---|---|---|---|---|---|
| 1 | 3 | 7 | 10 | 15 | 18 |
| | | | | | |

| CATEGORY DESCRIPTION | YEAR | PROCESS RATE | CATEGORY ADJUSTMENT | UNIT CODE | UNITS CODE DESCRIPTION | C/S | A/D | NBR | ACTION |
|---|---|---|---|---|---|---|---|---|---|
| 20 | 45 | 47 | 56 | 63 | 65 | 77 | 78 | 79 | 80 |
| | | | | | | | | 1 | |

| UNIFM | MONTHLY THRUPUT PERCENTAGE JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | HRS PER DAY | OPERWK | WKS PER YR | THRUPUT RATIO | MAXIMUM HOURLY THRUPUT | CONF | NITRO CONT | SULF CONT | ASH CONT | HEAT CONTENT | C/S | A/D | NBR | ACTION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 20 | 21 | 23 | 25 | 27 | 29 | 31 | 33 | 35 | 37 | 39 | 41 | 43 | 45 | 47 | 48 | 50 | 54 | 64 | 65 | 68 | 70 | 73 | 77 | 78 | 79 | 80 |
| | | | | | | | | | | | | | | | | ▲ | | ▲ | | ▲ | ▲ | | | | 2 | |

| UNIFHR | HOURLY THRUPUT PERCENTAGE 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | | C/S | A/D | NBR | ACTION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 20 | 21 | 23 | 25 | 27 | 29 | 31 | 33 | 35 | 37 | 39 | 41 | 43 | 45 | 47 | 49 | 51 | 53 | 55 | 57 | 59 | 61 | 63 | 65 | 67 | | 77 | 78 | 79 | 80 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | |

| NEDS A7 COMMENT | SOURCE | SOURCE OF INFORMATION NARRATIVE | | C/S | A/D | NBR | ACTION |
|---|---|---|---|---|---|---|---|
| 20 | 54 | 55 … 74 | | 77 | 78 | 79 | 80 |
| | | | | | | 4 | |

| POLLUTANT ID | EMISSION FACTOR | CONF | ORG | SRC | POLLUTANT SPECIFIC DATA | NEDS A7 EMISSION | POLLUTANT NAME | | C/S | A/D | NBR | ACTION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 20 | 25 | 35 | 36 | 37 | 38 | 48 | 55 … 69 | | 77 | 78 | 79 | 80 |
| | ▲ | | | | | | | | | | 5 | |
| | ▲ | | | | | | | | | | 5 | |
| | ▲ | | | | | | | | | | 5 | |
| | ▲ | | | | | | | | | | 5 | |
| | ▲ | | | | | | | | | | 5 | |
| | ▲ | | | | | | | | | | 5 | |
| | ▲ | | | | | | | | | | 5 | |
| | ▲ | | | | | | | | | | 5 | |
| | ▲ | | | | | | | | | | 5 | |
| | ▲ | | | | | | | | | | 5 | |
| | ▲ | | | | | | | | | | 5 | |
| | ▲ | | | | | | | | | | 5 | |
| | ▲ | | | | | | | | | | 5 | |
| | ▲ | | | | | | | | | | 5 | |
| | ▲ | | | | | | | | | | 5 | |
| | ▲ | | | | | | | | | | 5 | |

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Figure AST3-2 - continued. EIS/AS Master File Transaction Load Sheets

AGENCY________

EMISSIONS INVENTORY SYSTEM/AREA SOURCE (EIS/AS)
COMPREHENSIVE DATA HANDLING SYSTEM (CDHS)
NEDS A6 COMMENT

BY________
DATE ________
PAGE ____ OF ________

| STATE | COUNTY | AQCR | NEDS A6 COMMENT | | | ACTION |
|---|---|---|---|---|---|---|
| 1 | 3 | 7 | 10 | 78 | 79 | 80 |
| | | | | N | O | |
| | | | | N | O | |
| | | | | N | O | |
| | | | | N | O | |
| | | | | N | O | |
| | | | | N | O | |
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| | | | | N | O | |
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| | | | | N | O | |
| | | | | N | O | |
| | | | | N | O | |
| | | | | N | O | |
| | | | | N | O | |
| | | | | N | O | |
| | | | | N | O | |

(Page 4 of 5)

Figure AST3-2 - continued. EIS/AS Master File Transaction Load Sheets

AGENCY__________

## EMISSIONS INVENTORY SYSTEM/AREA SOURCE (EIS/AS)
## COMPREHENSIVE DATA HANDLING SYSTEM (CDHS)
## COMMENT TRANSACTIONS

BY__________
DATE__________
PAGE __OF________

| STATE 1 | COUNTY 3 | AQCR 7 | SUBALLOC NBR 10 | CATEG NBR 15 | DISAG NBR 18 |
|---|---|---|---|---|---|
| | | | | | |

| LINE NBR 20 | HALF COMMENT 23 … 72 | | 78 | NBR 79 | ACTION 80 |
|---|---|---|---|---|---|
| | | | R | | |
| | | | R | | |
| | | | R | | |
| | | | R | | |
| | | | R | | |
| | | | R | | |
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| | | | R | | |
| | | | R | | |
| | | | R | | |
| | | | R | | |
| | | | R | | |
| | | | R | | |
| | | | R | | |

(Page 5 of 5)
Figure AST3-2 - continued. EIS/AS Master File Transaction Load Sheets

```
//ASTES103 JOB    (ACCOUNTING INFO)
//*
//*   UPDATE THE EIS/AS MASTER FILE USING EIS/AS TRANSACTIONS
//*
//TES103A  EXEC FCFMM10,
//       FMFCFIL=FCFMFL1,
//       OLDMSTR=FCMSTR1,
//       NEWMSTR=ECMSTR2
//*
//*   UPDATE THE MASTER FILE FROM TEST 2 WITH EIS/AS TRANSACTIONS
//*
//EDIT.INPUT DD *
0612800670000007379                                                             SG1A
06128006700000                                                                  SG2A
06128006700000                               31012020402303                     SG3A
06128006700000                                                                  SG4A
06128006700000111111111111122222223333                                          SG5A
06128006700000  0023450       9500050097500005032150000987501                   SG6A
0612800670000042101CARBON MONOXIDEU       42401SULFUR DIOXIDE U                 CG7A
0612800670000043101HYDROCARBONS   U       11101PARTICULATES   U                 CG7A
0612800670000042602NITROGEN OXIDESU                                             CG7A
061280067AREA SOURCE TEST - SOME, BUT NOT ALL VALUES OR CATEGORIES               N0A
0612800670000179                                                                SG1A
06128006700001                                                                  SG2A
06128006700001                               31012020402303                     SG3A
06128006700001                                                                  CG4A
06128006700001111112222223333334444444                                          SG5A
06128006700001  0012345       9500050097500005032150000987501                   SG6A
06128006700500                                                                  SG1A
06128006700500                                                                  CG2A
06128006700500                               22021010505222                     SG3A
06128006700500                                                                  SG4A
06128006700500111112222223333334444444                                          SG5A
06128006700500                                                                  SG6A
0612800670061179                                                                SG1A
06128006700611                                                                  SG2A
06128006700611                               31012020402303                     SG3A
06128006700611                                                                  SG4A
06128006700611                                                                  SG4A
06128006700611                                                                  SG5A
06128006700611                                                                  SG6A
06128006700611                                                                  SG1A
0612800679999479
```

(Remainder of transactions omitted)

```
//EDIT.OPTIONS DD *
RO FLAGW   LIST
//INSERT.OPTIONS DD *
FLAGW   NIT T  SUL I  ASH I  EMISSION I  CONF I  SPEC I  CDAT 77001 PDAT 77001
//UPDATE.OPTIONS DD *
RO FLAGW
```

Reproduced from
best available copy.

Figure AST3-3.  Run Stream

```
                                         EIS/AS TRANSACTION EDIT PROGRAM  -  DIAGNOSTIC REPORT                                 PAGE       1

PROGRAM NAME: CEDMSTR (EC0040)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980

OPTIONS IN EFFECT: CONTROL YEAR 60   FLAGW      LIST

061280067000007379                                                              SG1A                                        REF:       1
                B E
          *** CEDMSTR 014 ERROR - SUBCOUNTY WITH ZERO SUBALLOCATION NUMBER, CARD REJECTED
          *** CEDMSTR 030 ERROR - COLUMN 17 - INVALID DAY, REPLACING SPACES

06128006700000                                                                  SG2A                                        REF:       2
          *** CEDMSTR 014 ERROR - SUBCOUNTY WITH ZERO SUBALLOCATION NUMBER, CARD REJECTED
          *** CEDMSTR 143 ERROR - ALL NON-KEY FIELDS CONTAIN SPACES, CARD REJECTED

06128006700000                           31012020402303                         SG3A                                        REF:       3
                                         BE  BE  B EB E
          *** CEDMSTR 014 ERROR - SUBCOUNTY WITH ZERO SUBALLOCATION NUMBER, CARD REJECTED
          *** CEDMSTR 040 CONDITIONAL - COLUMN 40 - SULFUR-ANTHRACITE COAL OUT OF RANGE
          *** CEDMSTR 044 CONDITIONAL - COLUMN 44 - SULFUR-DISTILLATE OIL OUT OF RANGE
          *** CEDMSTR 048 CONDITIONAL - COLUMN 48 - ASH-ANTHRACITE COAL OUT OF RANGE
          *** CEDMSTR 050 CONDITIONAL - COLUMN 51 - ASH-BITUMINOUS COAL OUT OF RANGE

06128006700000                                                                  SG4A                                        REF:       4
          *** CEDMSTR 014 ERROR - SUBCOUNTY WITH ZERO SUBALLOCATION NUMBER, CARD REJECTED
          *** CEDMSTR 143 ERROR - ALL NON-KEY FIELDS CONTAIN SPACES, CARD REJECTED

06128006700000111111111111222222223335                                          SG5A                                        REF:       5
          *** CEDMSTR 014 ERROR - SUBCOUNTY WITH ZERO SUBALLOCATION NUMBER, CARD REJECTED

06128006700000  0023450       9500050097500005032150000987501                   SG6A                                        REF:       6
          *** CEDMSTR 014 ERROR - SUBCOUNTY WITH ZERO SUBALLOCATION NUMBER, CARD REJECTED

06128006700001                                                                  SG2A                                        REF:      12
          *** CEDMSTR 143 ERROR - ALL NON-KEY FIELDS CONTAIN SPACES, CARD REJECTED

06128006700001                           31012020402303                         SG3A                                        REF:      13
                                         RE  BE  B EB E
          *** CEDMSTR 040 CONDITIONAL - COLUMN 40 - SULFUR-ANTHRACITE COAL OUT OF RANGE
          *** CEDMSTR 044 CONDITIONAL - COLUMN 44 - SULFUR-DISTILLATE OIL OUT OF RANGE
          *** CEDMSTR 048 CONDITIONAL - COLUMN 48 - ASH-ANTHRACITE COAL OUT OF RANGE
          *** CEDMSTR 050 CONDITIONAL - COLUMN 51 - ASH-BITUMINOUS COAL OUT OF RANGE

06128006700001                                                                  CG4A                                        REF:      14
          *** CEDMSTR 013 ERROR - COUNTY WITH NONZERO SUBALLOCATION NUMBER, CARD REJECTED
          *** CEDMSTR 143 ERROR - ALL NON-KEY FIELDS CONTAIN SPACES, CARD REJECTED

06128006700500                                                                  SG1A                                        REF:      17
              RE
          *** CEDMSTR 015 ERROR - COLUMN 15 - INVALID YEAR OF RECORD, CARD REJECTED
```

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Figure AST3-4. Sample Output

```
                                       EIS/AS TRANSACTION EDIT PROGRAM  -  DIAGNOSTIC REPORT                              PAGE      5
0612800670000100135                                             0            SD2A
           B                                                                                                             REF:     251
          *** CEDMSTR 114 WARNING - COLUMN 20 - UNIFORM MONTHLY INDICATOR BLANK, ASSUMING Y

0612800670000100199                                             0            SD2A
           B                                                                                                             REF:     254
          *** CEDMSTR 114 WARNING - COLUMN 20 - UNIFORM MONTHLY INDICATOR BLANK, ASSUMING Y

0612800670000100199MASTER FILE TEST DATA              S                      CD4A
          *** CEDMSTR 013 ERROR - COUNTY WITH NONZERO SUBALLOCATION NUMBER, CARD REJECTED                                REF:     255

0612800670050000101MASTERFILE TEST DATA               S         0            CA4A
          *** CEDMSTR 013 ERROR - COUNTY WITH NONZERO SUBALLOCATION NUMBER, CARD REJECTED                                REF:     257
          *** CEDMSTR 019 ERROR - AGGREGATE TRANSACTION WITH NONZERO DISAGGREGATE NUMBER, CARD REJECTED

0612800670050000122                                             0            SD2A
           B                                                                                                             REF:     258
          *** CEDMSTR 114 WARNING - COLUMN 20 - UNIFORM MONTHLY INDICATOR BLANK, ASSUMING Y

0612800670050000170                                             0            CD2A
           B                                                                                                             REF:     263
          *** CEDMSTR 013 ERROR - COUNTY WITH NONZERO SUBALLOCATION NUMBER, CARD REJECTED
          *** CEDMSTR 114 WARNING - COLUMN 20 - UNIFORM MONTHLY INDICATOR BLANK, ASSUMING Y

0612800670061100835                                             0            SD2A
           B                                                                                                             REF:     266
          *** CEDMSTR 114 WARNING - COLUMN 20 - UNIFORM MONTHLY INDICATOR BLANK, ASSUMING Y

0612800679999900199                                             0            SD2A
           B                                                                                                             REF:     271
          *** CEDMSTR 114 WARNING - COLUMN 20 - UNIFORM MONTHLY INDICATOR BLANK, ASSUMING Y

0622380670000002300                                             0            CA2A
           B                                                                                                             REF:     274
          *** CEDMSTR 114 WARNING - COLUMN 20 - UNIFORM MONTHLY INDICATOR BLANK, ASSUMING Y

0622380670000004700                                             0            CA2A
           B                                                                                                             REF:     283
          *** CEDMSTR 114 WARNING - COLUMN 20 - UNIFORM MONTHLY INDICATOR BLANK, ASSUMING Y

0622380670000006000                                             0            CA2A
           B                                                                                                             REF:     291
          *** CEDMSTR 114 WARNING - COLUMN 20 - UNIFORM MONTHLY INDICATOR BLANK, ASSUMING Y

NUMBER OF INPUT TRANSACTIONS:          453
NUMBER OF VALID TRANSACTIONS:          429
NUMBER OF REJECTED TRANSACTIONS:        24
NUMBER OF TRANSACTIONS WRITTEN:        429
NUMBER OF WARNING MESSAGES:             53
NUMBER OF CONDITIONAL MESSAGES:         21
NUMBER OF ERROR MESSAGES:               30
NUMBER OF ABORT MESSAGES:                0
NUMBER OF DISASTER MESSAGES:             0
```

Figure AST3-4 - continued. Sample Output

```
                                   EIS/AS TRANSACTION EDIT PROGRAM  -  DIAGNOSTIC REPORT                              PAGE      6
PROGRAM NAME: CEDMSTR (EC0040)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980
```

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Figure AST3-4 - continued.  Sample Output

```
                                                  EIS/AS INPUT TRANSACTIONS                                                  PAGE        1
061280067000007379                                                      SG1A                                       REF:          1
06128006700000                                                          SG2A                                                     2
06128006700000                       31012020402303                     SG3A                                                     3
06128006700000                                                          SG4A                                                     4
0612800670000011111111111122222223333                                   SG5A                                                     5
06128006700000  0023450      9500050097500005032150000987501            SG6A                                                     6
0612800670000042101CARBON MONOXIDE 0       42401SULFUR DIOXIDE 0        CG7A                                                     7
0612800670000043101HYDROCARBONS   0        11101PARTICULATES   0        CG7A                                                     8
0612800670000042602NITROGEN OXIDES0                                     CG7A                                                     9
061280067AREA SOURCE TEST - SOME, BUT NOT ALL VALUES OR CATEGORIES       NOA                                                    10
0612800670000179                                                        SG1A                                                    11
06128006700001                                                          SG2A                                                    12
06128006700001                       31012020402303                     SG3A                                                    13
06128006700001                                                          CG4A                                                    14
0612800670000111111222222333334444444                                   SG5A                                                    15
06128006700001  0012345      9500050097500005032150000987501            SG6A                                                    16
06128006700500                                                          SG1A                                                    17
06128006700500                                                          CG2A                                                    18
06128006700500                       22021010505222                     SG3A                                                    19
06128006700500                                                          SG4A                                                    20
0612800670050011111122222233333444444                                   SG5A                                                    21
06128006700500                                                          SG6A                                                    22
0612800670061179                                                        SG1A                                                    23
06128006700611                                                          SG2A                                                    24
06128006700611                       31012020402303                     SG3A                                                    25
06128006700611                                                          SG4A                                                    26
06128006700611                                                          SG4A                                                    27
06128006700611                                                          SG5A                                                    28
06128006700611                                                          SG6A                                                    29
0612800679999979                                                        SG1A                                                    30
06128006799999                                                          SG2A                                                    31
06128006799999                       10102222444333                     SG3A                                                    32
06128006799999                                                          SG44                                                    33
0612800679999922222444441111100000033                                   SG54                                                    34
06128006799999  1234567                                                 SG6A                                                    35
0622380670000079                                                        CG1A                                                    36
06223806700000                                                          CG2A                                                    37
06223806700000                       33221144555666                     CG3A                                                    38
06223806700000                                                          CG4A                                                    39
0622380670000011111333334444440000222                                   CG5A                                                    40
06223806700000  0009876      9500050097500005032100009875012            CG6A                                                    41
062238067AREA SOURCE TEST - SOME, BUT NOT ALL VALUES OR CATEGORIES       NOA                                                    42
0612800670000000100RESIDENT ANTHRACITE COAL 79000040123                 CA1A                                                    43
0612800670000000200RESIDENT BITUMINOUS COAL 79000020010                 CA1A                                                    44
0612800670000000300RESIDENT DISTILLATE OIL  79000009750                 CA1A                                                    45
0612800670000000400RESIDENTIAL RESIDUAL OIL 79000008900                 CA1A                                                    46
0612800670000000500RESIDENTIAL NATURAL GAS  79000023550                 CA1A                                                    47
0612800670000000600RESIDENTIAL WOOD         79000000050                 CA1A                                                    48
0612800670000000700COMM-INST ANTHRACITE COAL79000023500                 CA1A                                                    49
0612800670000000800COMM-INST BITUMINOUS COAL79000034750                 CA1A                                                    50
0612800670000000900COMM-INST DISTILLATE OIL 79000042100                 CA1A                                                    51
0612800670000001000COMM-INST RESIDUAL OIL   79000000396                 CA1A                                                    52
0612800670000001100COMM-INST NATURAL GAS    79000008750                 CA1A                                                    53
```

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Figure AST3-4 - continued. Sample Output

```
                                                        EIS/AS INPUT TRANSACTIONS                                              PAGE        9
310015011008768666600110, 20, 30, FURTHER SUBDIVISION LATER                                   R2A                  REF:       425
3100150110087686601CAT 100 DISAG 10           790012359120001312                                SD1A                             426
3100150110087686601Y                          247520013              108761102003450SD2A                             427
3100150110087686601Y                                                                            SD3A                             428
3100150110087686601                                               L LOCAL GOVRNMT               SD4A                             429
31001501100876866011110100012413985LA                              TSP                          SD5A                             430
31001501100876866011111400012411985LA                              WINDBLN PART                 SD5A                             431
31001501100876866012230600012411985LA                              NITRATES                     SD5A                             432
31001501100876866014210100012433985LA                              CO                           SD5A                             433
31001501100876866014240100012013985LA                              SO2                          SD5A                             434
31001501100876866014260100012019985LAJ/112-A                       NO                           SD5A                             435
31001501100876866014260300012017385LAJ/1188A                       NOX                          SD5A                             436
31001501100876866014310200012014485LA                              NONMETH HC                   SD5A                             437
31001501100876866011110300012014495LA                              BENZENE ORGNICS              SD5A                             438
31001501100876866012110100023014495LA                              TOTAL DUSTFALLS              SD5A                             439
31001501100876866012240300023164495LA                              TSULFATES                    SD5A                             440
31001501100876866014210200023177495LA                              CO2                          SD5A                             441
31001501100876866014240200020007495LA                              HYDROGEN SULFDE              SD5A                             442
31001501100876866014260200043007495LAS-JJJJ-55                     NO2                          SD5A                             443
31001501100876866014350200042007495LAS-JJJ5555                     FORMALYHYDE                  SD5A                             444
31001501100876866014310100042227495LAS-JJJ5555                     HC                           SD5A                             445
31001501100876866014310100333227495LAS-JJJ5555                     HC                           SD5A                             446
31001501100876866014410100000000000LAS                             TOTAL OXIDANTS               SD5A                             447
31001501100876866014420100000000230LA                              OZONE                        SD5A                             448
31001501100876        001AREA IS BOUNDED BY ROUTES 17,35,49, AND 1001A                           R1A                             449
31001501100876        002THREE FACTORIES, ONE AIRSTRIP, ONE QUAARRY AND                          R1A                             450
31001501100876        00215 FARMS INCLUDED, REST IS URBAN                                        R2A                             451
31001501100876866601001CATEGORY IS BROKEN INTO THREE SUBALLOCATIONS                            R1A                             452
310015011008768660100110, 20, 30, FURTHER SUBDIVISION LATER                                   R2A                             453

NUMBER OF INPUT TRANSACTIONS:         453
NUMBER OF VALID TRANSACTIONS:         429
NUMBER OF REJECTED TRANSACTIONS:       24
```

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Figure AST3-4 - continued. Sample Output

```
                                        EIS/AS EDITED TRANSACTIONS (INTERNAL TRANSACTION FORMAT)                                 PAGE        1
061280       00000000000000071CG06742101CARBON MONOXIDE0       42401SULFUR DIOXIDE 0                                             REF:        7
061280       00000000000000071CG06743101HYDROCARBONS   0       11101PARTICULATES   0                                                         8
061280       00000000000000071CG06742602NITROGEN OXIDES0                                                                                     9
061280       0000000000200001 N067AREA SOURCE TEST - SOME, BUT NOT ALL VALUES OR CATEGORIES                                                 10
061280       00001000000000011SG06779                                                                                                       11
061280       00001000000000031SG067                         31012020402303                                                                  13
061280       00001000000000051SG0671111122222233333444444                                                                                   15
061280       00001000000000061SG067  0012345      9500050097500005032150000987501                                                           16
061280       00500000000000031SG067                         22021010505222                                                                  19
061280       00500000000000051SG0671111112222223333344444                                                                                   21
061280       00611000000000011SG06779                                                                                                       23
061280       00611000000000031SG067                         31012020402303                                                                  25
061280       99990000000000011SG06779                                                                                                       30
061280       99990000000000031SG067                         10102222444333                                                                  32
061280       99990000000000051SG06722222244444111110000033                                                                                  34
061280       99990000000000061SG067  1234567                                                                                                35
062238       00000000000000011CG06779                                                                                                       36
062238       00000000000000031CG067                         33221144555666                                                                  38
062238       00000000000000051CG0671111133333444440002222                                                                                   40
062238       00000000000000061CG067  0009876      9500050097500005032100009875012                                                           41
062238       0000000000200001 N067AREA SOURCE TEST - SOME, BUT NOT ALL VALUES OR CATEGORIES                                                 42
061280       0000000100100011CA067RESIDENT ANTHRACITE COAL 79000040123                                                                      43
061280       0000000200100011CA067RESIDENT BITUMINOUS COAL 79000020010                                                                      44
061280       0000000300100011CA067RESIDENT DISTILLATE OIL  79000009750                                                                      45
061280       0000000400100011CA067RESIDENTIAL RESIDUAL OIL 79000008900                                                                      46
061280       0000000500100011CA067RESIDENTIAL NATURAL GAS  79000023550                                                                      47
061280       0000000600100011CA067RESIDENTIAL WOOD         79000000050                                                                      48
061280       0000000700100011CA067COMM-INST ANTHRACITE COAL79000023500                                                                      49
061280       0000000800100011CA067COMM-INST BITUMINOUS COAL79000034750                                                                      50
061280       0000000900100011CA067COMM-INST DISTILLATE OIL 79000042100                                                                      51
061280       0000001000100011CA067COMM-INST RESIDUAL OIL   79000000390                                                                      52
061280       0000001100100011CA067COMM-INST NATURAL GAS    79000008750                                                                      53
061280       0000001200100011CA067COMM-INST WOOD           79000000005                                                                      54
061280       0000001300100011CA067INDUSTRY ANTHRACITE COAL 79000098750                                                                      55
061280       0000001400100011CA067INDUSTRY BITUMINOUS COAL 79000123400                                                                      56
061280       0000001500100011CA067INDUSTRIAL COKE          79000009850                                                                      57
061280       0000001600100011CA067INDUSTRIAL DISTILLATE OIL79000021500                                                                      58
061280       0000001700100011CA067INDUSTRIAL RESIDUAL OIL  79000000980                                                                      59
061280       0000001800100011CA067INDUSTRIAL NATURAL GAS   79000056900                                                                      60
061280       0000001900100011CA067INDUSTRIAL WOOD          79000000025                                                                      61
061280       0000002000100011CA067INDUSTRIAL PROCESS GAS   79000002350                                                                      62
061280       0000000100100021CA067Y080809080809080809080809                    0                                                            63
061280       0000000200100021CA067Y080809080809080809080809                    0                                                            64
061280       0000000300100021CA067Y080809080809080809080809                    0                                                            65
061280       0000000400100021CA067Y080809080809080809080809                    0                                                            66
061280       0000000500100021CA067Y080809080809080809080809                    0                                                            67
061280       0000000600100021CA067Y080809080809080809080809                    0                                                            68
061280       0000000600100021CA067Y080809080809080809080809                    0                                                            69
061280       0000000700100021CA067Y080809080809080809080809                    0                                                            70
061280       0000000700100021CA067Y080809080809080809080809                    0                                                            71
061280       0000000800100021CA067Y080809080809080809080809                    0                                                            72
061280       0000000900100021CA067Y080809080809080809080809                    0                                                            73
061280       0000001000100021CA067Y080809080809080809080809                    0                                                            74
```

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Figure AST3-4 - continued. Sample Output

```
                                  EIS/AS EDITED TRANSACTIONS (INTERNAL TRANSACTION FORMAT)                                PAGE     9

310015    0087600000200111 R011AREA IS BOUNDED BY ROUTES 17,35,49, AND 1001A                                       REF:     449
310015    0087600000200211 R011THREE FACTORIES, ONE AIRSTRIP, ONE QUAARRY AND                                               450
310015    0087600000200221 R01115 FARMS INCLUDED, REST IS URBAN                                                             451
310015    0087666601200111 R011CATEGORY IS BROKEN INTO THREE SUBALLOCATIONS                                                 452
310015    0087666601200121 R01110, 20, 30, FURTHER SUBDIVISION LATER                                                        453

NUMBER OF TRANSACTIONS WRITTEN:       429

- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

                EIS/AS MASTER FILE INTERNAL TRANSACTION SORT PROGRAM  -  DIAGNOSTIC REPORT                               PAGE     1

PROGRAM NAME: CSRINTR (EC0050)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980


NUMBER OF INPUT TRANSACTIONS READ:                         429
NUMBER OF TRANSACTIONS WRITTEN:                            430
```

(Page 7 of 12)

Figure AST3-4 - continued. Sample Output

```
                                        EMISSION FACTOR INSERTION PROGRAM                                          PAGE    1

PROGRAM NAME: CMSEFIN (EC0060)
REVISION LEVEL:  1-00
LAST UPDATE #:  A-1
DATE INCORPORATED:  FEBRUARY 1, 1980


OPTIONS IN EFFECT:  FLAGW

      FIELDS SELECTED FOR INSERTIONS:  NIT  SUL  ASH  EMISSION  CONF  SPEC  CDAT 77001 PDAT 77001

      FIELDS TO BE OVERRIDDEN:  NONE


FLAGW   NIT I  SUL I  ASH I  EMISSION I  CONF I  SPEC I  CDAT 77001 PDAT 77001


      *** CMSEFIN 022 ERROR - NO VALID OVERRIDES SPECIFIED - NO OVERRIDES ASSUMED


NITROGEN I  N  SULFUR I  N  ASH I  N  EMISSION FACTOR I  N  CONF LEVEL I  N  SPEC DATA I  N    DATE: CATEGORY 77001  POLLUTANT 77001


      *** CMSEFIN 009 CONDITIONAL - EMISSION FACTOR FILE CONTAINS FEDERAL CATEGORY RECORDS FOR CATEGORIES OTHER THAN 1-64

061280    000000010010002ICA067Y080809080809080809080809                         0
      *** CMSEFIN 011 WARNING - NO MATCHING STATE OR LOCAL EMISSION FACTOR RECORD FOR CATEGORY 2 TRANS

061280    00000001001000051CA06711101           OS                    PARTICULATES
      *** CMSEFIN 017 WARNING - NO MATCHING STATE OR LOCAL EMISSION FACTOR RECORD FOR CATEGORY 5 TRANS
```

(Page 8 of 12)

Figure AST3-4 - continued. Sample Output

```
                                  EMISSION FACTOR INSERTION PROGRAM                                                    PAGE  13

NITROGEN I  N  SULFUR I  N  ASH I  N  EMISSION FACTOR I  N  CONF LEVEL I  N  SPEC DATA I  N    DATE: CATEGORY 77001  POLLUTANT 77001


310015    0087686666100051SD0114310100333227495LAS-JJJ5555        HC
          *** CMSEFIN 017 WARNING - NO MATCHING STATE OR LOCAL EMISSION FACTOR RECORD FOR CATEGORY 5 TRANS

310015    0087686666100051SD0114310200012014485LA                 NONMETH HC
          *** CMSEFIN 017 WARNING - NO MATCHING STATE OR LOCAL EMISSION FACTOR RECORD FOR CATEGORY 5 TRANS

310015    0087686666100051SD0114350200042007495LAS-JJJ5555        FORMALYHYDE
          *** CMSEFIN 017 WARNING - NO MATCHING STATE OR LOCAL EMISSION FACTOR RECORD FOR CATEGORY 5 TRANS

310015    0087686666100051SD01144101000000000000LAS               TOTAL OXIDANTS
          *** CMSEFIN 017 WARNING - NO MATCHING STATE OR LOCAL EMISSION FACTOR RECORD FOR CATEGORY 5 TRANS

310015    0087686666100051SD011442010000000230LA                  OXONE
          *** CMSEFIN 017 WARNING - NO MATCHING STATE OR LOCAL EMISSION FACTOR RECORD FOR CATEGORY 5 TRANS


PROGRAM NAME: CMSEFIN (EC0060)
REVISION LEVEL:  1-00
LAST UPDATE #:  A-1
DATE INCORPORATED:  FEBRUARY 1, 1980



NUMBER OF INPUT TRANSACTIONS:                         430
NUMBER OF EMISSION FACTOR RECORDS READ:               682
NUMBER OF STATE AND LOCAL INSERTIONS MADE:            150
NUMBER OF FEDERAL INSERITONS MADE:                     17
NUMBER OF OUTPUT TRANSACTIONS:                        430
```

(Page 9 of 12)

Figure AST3-4 - continued. Sample Output

```
                        EIS/AS MASTER FILE MAINTENANCE PROGRAM  -  DIAGNOSTIC MESSAGES                               PAGE     1
PROGRAM NAME: CFMMSTR (EC0070)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980

OPTION CARD

  CONTROL DATE IS 80   ,  ERROR OPTION IS FLAGW  ,  LIST OPTION IS NOLIST


310015    00135000000000071SG01122306NITRATES        U000123 22403SULFATES       A000123
                                   *** CFMMSTR 016 ERROR - ATTEMPT TO ADD MORE THAN MAX NUMBER OF DESCRIPTION POLLUTANTS
                                   *** CFMMSTR 016 ERROR - ATTEMPT TO ADD MORE THAN MAX NUMBER OF DESCRIPTION POLLUTANTS

310015    00135100101000051SD0114410100000000000LAS                 TOTAL OXIDANTS
                                   *** CFMMSTR 013 ERROR - ATTEMPT TO ADD MORE THAN MAXIMUM NUMBER OF CATEGORY POLLUTANTS

310015    0013510010100051SD011442010000000230LA                    OZONE
                                   *** CFMMSTR 013 ERROR - ATTEMPT TO ADD MORE THAN MAXIMUM NUMBER OF CATEGORY POLLUTANTS

310015    001351001010000000011SDCAT 100 DISAG 10         790012359120001312            Y080809080809080809080809247520013
                                   *** CFMMSTR 023 ERROR - OVERFLOW FOR EMISSIONS ESTIMATE - RESULT INVALID

310015    001351001010000000011SDCAT 100 DISAG 10         790012359120001312            Y080809080809080809080809247520013
                                   *** CFMMSTR 023 ERROR - OVERFLOW FOR EMISSIONS ESTIMATE - RESULT INVALID

310015    001351001010000000011SDCAT 100 DISAG 10         790012359120001312            Y080809080809080809080809247520013
                                   *** CFMMSTR 023 ERROR - OVERFLOW FOR EMISSIONS ESTIMATE - RESULT INVALID

310015    001351001010000000011SDCAT 100 DISAG 10         790012359120001312            Y080809080809080809080809247520013
                                   *** CFMMSTR 023 ERROR - OVERFLOW FOR EMISSIONS ESTIMATE - RESULT INVALID

310015    001351001010000000011SDC[illegible] 100 DISAG 10         790012359120001312            Y080809080809080809080809247520013
                                   *** CFMMSTR 023 ERROR - OVERFLOW FOR EMISSIONS ESTIMATE - RESULT INVALID

310015    001351001010000000011SDCAT 100 DISAG 10         790012359120001312            Y080809080809080809080809247520013
                                   *** CFMMSTR 023 ERROR - OVERFLOW FOR EMISSIONS ESTIMATE - RESULT INVALID
```

(Page 10 of 12)

Figure AST3-4 - continued. Sample Output

```
                EIS/AS MASTER FILE MAINTENANCE PROGRAM  -  DIAGNOSTIC MESSAGES                                    PAGE    2
310015   001351001010000000011SDCAT 100 DISAG 10          790012359120001312              Y080809080809080809080809247520013
                             *** CFMMSTR 023 ERROR - OVERFLOW FOR EMISSIONS ESTIMATE - RESULT INVALID

310015   001351001010000000011SDCAT 100 DISAG 10          790012359120001312              Y080809080809080809080809247520013
                             *** CFMMSTR 023 ERROR - OVERFLOW FOR EMISSIONS ESTIMATE - RESULT INVALID

310015   001351001010000000011SDCAT 100 DISAG 10          790012359120001312              Y080809080809080809080809247520013
                             *** CFMMSTR 023 ERROR - OVERFLOW FOR EMISSIONS ESTIMATE - RESULT INVALID

310015   001351001010000000011SDCAT 100 DISAG 10          790012359120001312              Y080809080809080809080809247520013
                             *** CFMMSTR 023 ERROR - OVERFLOW FOR EMISSIONS ESTIMATE - RESULT INVALID

310015   001351001010000000011SDCAT 100 DISAG 10          790012359120001312              Y080809080809080809080809247520013
                             *** CFMMSTR 023 ERROR - OVERFLOW FOR EMISSIONS ESTIMATE - RESULT INVALID

310015   001351001010000000011SDCAT 100 DISAG 10          790012359120001312              Y080809080809080809080809247520013
                             *** CFMMSTR 023 ERROR - OVERFLOW FOR EMISSIONS ESTIMATE - RESULT INVALID

310015   001351001010000000011SDCAT 100 DISAG 10          790012359120001312              Y080809080809080809080809247520013
                             *** CFMMSTR 023 ERROR - OVERFLOW FOR EMISSIONS ESTIMATE - RESULT INVALID

310015   001351001010000000011SDCAT 100 DISAG 10          790012359120001312              Y080809080809080809080809247520013
                             *** CFMMSTR 023 ERROR - OVERFLOW FOR EMISSIONS ESTIMATE - RESULT INVALID

310015   001351001010000000011SDCAT 100 DISAG 10          790012359120001312              Y080809080809080809080809247520013
                             *** CFMMSTR 023 ERROR - OVERFLOW FOR EMISSIONS ESTIMATE - RESULT INVALID

310015   001351001010000000011SDCAT 100 DISAG 10          790012359120001312              Y080809080809080809080809247520013
                             *** CFMMSTR 023 ERROR - OVERFLOW FOR EMISSIONS ESTIMATE - RESULT INVALID

310015   003670000000071SG01111114WINDBLN PART   0000123 21101TOTAL DUSTFALL A000123
                             *** CFMMSTR 016 ERROR - ATTEMPT TO ADD MORE THAN MAX NUMBER OF DESCRIPTION POLLUTANTS
                             *** CFMMSTR 016 ERROR - ATTEMPT TO ADD MORE THAN MAX NUMBER OF DESCRIPTION POLLUTANTS

310015   0036723401100051SD01144101000000000000LAS                  TOTAL OXIDANTS
                             *** CFMMSTR 013 ERROR - ATTEMPT TO ADD MORE THAN MAXIMUM NUMBER OF CATEGORY POLLUTANTS

310015   0036723401100051SD0114420100000000230LA                    OXONE
```

(Page 11 of 12)

Figure AST3-4 - continued. Sample Output

```
                      EIS/AS MASTER FILE MAINTENANCE PROGRAM  -  DIAGNOSTIC MESSAGES                                    PAGE    8
      NUMBER OF INPUT TRANSACTIONS READ:                                430
      NUMBER OF DISASTERS DETECTED:                                       0
      NUMBER OF ABORTS DETECTED:                                          0
      NUMBER OF ERRORS DETECTED:                                         78
      NUMBER OF CONDITIONALS DETECTED:                                    0
      NUMBER OF WARNINGS DETECTED:                                        0
      NUMBER OF TRANSACTIONS REJECTED:                                   11
      NUMBER OF AREA SOURCE FILE RECORDS READ IN:                       349
      NUMBER OF AREA SOURCE FILE RECORDS WRITTEN OUT:                   417
```

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Figure AST3-4 - continued. Sample Output

## EIS/AS Test 4

## Produce a Formatted Dump of the Master File

In this test run, a formatted dump of the EIS/AS master file output from Test 3 is printed using the cataloged procedure ECRPM30 which executes CRPDUMP (EC0140), the master file formatted dump program.

CRPDUMP (EC0140) produces a formatted dump of the EIS/AS master file; i.e., a listing with identifying headings of all the fields in each master file record, as the record appears in the file. This formatted dump is useful for verifying information contained in a master file and isolating invalid data.

The options in this program are used to specify the number of lines per printed page and the portion of the master file to be dumped. The maximum number of lines per printed page can be specified by the user in card columns 1 and 2 of the option card. This option can reduce the amount of paper used by those who have standard 11 x 14 inch output forms and the ability to print eight lines per inch. The maximum number of lines to be printed per page should be a number between 20 and 80. There are two other user-specified options: the number of records to be skipped before printing the first record to be dumped and the total number of records to be dumped. These two options make it possible for users to inspect specific portions of the master file without having to list the entire file. Columns 3 through 8 are used for coding the number of records to be skipped, and columns 9 through 14 are used for the total number of records to be dumped. If the number of records to be skipped is specified, but the number of records to be dumped is not, all records will be dumped except those that are specified to be skipped. One or more options as well as the entire option card can be omitted. The default options are 55 lines per page, no records skipped, and the entire file dumped.

The run stream for this test run contains the JCL needed for dumping the contents of the master file. This run stream is shown in Figure AST4-1.

The cataloged procedure executed by this run stream is ECRPM30. A substitutable parameter specifies the input master file as ECMSTR2 (created in Test 3). The user must supply the DD (data definition) information for the option card file. The option card is not present in this run stream; therefore, the default options are in effect. Refer to Figure AST4-2 for the sample output produced by this run stream.

```
//ASTEST04 JOB    (ACCOUNTING INFO)
//*
//*   PRODUCE A FORMATTED DUMP OF THE FIS/AS MASTER FILE
//*
//TEST04A EXEC ECRPM30,
//       MSTRFIL=ECMSTR2
//*
//*   GENERATE A DUMP OF THE MASTER FILE CREATED IN TEST 3
//*
```

Figure AST4-1.  Run Stream

```
                              EIS/AS MASTER FILE FORMATTED DUMP PROGRAM  -  DIAGNOSTIC REPORT                          PAGE    1
PROGRAM NAME: CRPDUMP (EC0140)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980

OPTIONS IN EFFECT:  55 LINES PER PAGE;         0 RECORDS SKIPPED;     ALL RECORDS TO BE DUMPED

*** CRPDUMP 003 CONDITIONAL - NO VALID LINE SPECIFICATION - DEFAULT OF 55 ASSUMED
*** CRPDUMP 004 CONDITIONAL - NO VALID VALUE SPECIFIED FOR NUMBER OF RECORDS TO BE SKIPPED - DUMP STARTS AT FIRST RECORD
*** CRPDUMP 005 CONDITIONAL - NO VALID VALUE SPECIFIED FOR NUMBER OF RECORDS TO BE DUMPED - ENTIRE FILE DUMPED

NUMBER OF DESCRIPTION RECORDS DUMPED:                18
NUMBER OF CATEGORY RECORDS DUMPED:                  379
NUMBER OF COMMENT RECORDS DUMPED:                    20
TOTAL NUMBER OF RECORDS READ:                       417
```

(Page 1 of 2)

Figure AST4-2. Sample Output

Reproduced from best available copy.

```
                                         EIS/AS MASTER FILE FORMATTED DUMP                                                  PAGE      1

     STATE=06    COUNTY=1280    GEOGR/SUBALLOC/#=00000    CATEGRY/#=000    DISAGGR/#=00    RECORD/TYPE/(KEY)=0    LINE/#=000    BATCH=
AQCR=067 RC/TYPE=CG YR=    UT=      AIR/BASIN=     SMSA=      AREA=              MJ/ACT=                    PLT/ID=       BSE/YR=  PRJD/YR=
PURL/POP/%=    POPUL=            AQCR/NM=                              SUBAL/TECHNQ/CD=    SUBAL/TECHNQ/DESC=                      DEFND/AREA/CD=
SULFUR/CONTENTS: (ANTHRACT/COAL=  ,BITUMNS/COAL=  ,DISTILLT/OIL=  ,RESID/OIL=  )  ASH/CONTENTS: (ANTHRACT/COAL=   ,BITUMNS/COAL=   )
#/DIM/COORDS=0      1ST: (ZONE=  ,HORIZ=      ,VERT=         )   2ND: (ZONE=  ,HORIZ=      ,VERT=        )   3RD: (ZONE=  ,HORIZ=      ,VERT=       )
                    4TH: (ZONE=  ,HORIZ=      ,VERT=         )   5TH: (ZONE=  ,HORIZ=      ,VERT=        )   6TH: (ZONE=  ,HORIZ=      ,VERT=       )
SOURCE/TYPE=    LENGTH/AREA=             LENGTH/AREA/UNITS/CODE=       STP/ESTIMATES:  (TSP=         , SO2=       , NOx=       , HC=       , CO=       )
POP/CODE=    VEH: (GAS/LGT=              GAS/HEV=              DIESL/HEV=          )  MVMILES/RDS: (LIM/ACCS=         RUR=            SUB=          URB=       )
NEDS/A1/FLG= A EIS/FLGS: (CARD/1= ,CARD/2= ,CARD/3= ,CARD/4= ,CARD/5= ,CARD/6= )  #/POLL=05
** POLL/ID      POLL/NAME      ATTNMNT/STATUS AQMA/# EIS/FLG/CRD/7   ** POLL/ID      POLL/NAME      ATTNMNT/STATUS AQMA/# EIS/FLG/CRD/7   **
**  42602                             U                     A         **  43101    HYDROCARBONS        U                          A         **
**  11101    PARTICULATES             U                     A         **  42101    CARBON MONOXIDE     U                          A         **
**  42401    SULFUR DIOXIDE           U                     A         **                                                                    **
                                                                                                                                            **
---------------------------------------------------------------------------------------------------------------------------------------------

     STATE=06    COUNTY=1280    GEOGR/SUBALLOC/#=00000    CATEGRY/#=000    DISAGGR/#=00    RECORD/TYPE/(KEY)=2    LINE/#=000    BATCH=
AQCR=067  REC/TYPE= N  COMMENT=AREA SOURCE TEST - SOME, BUT NOT ALL VALUES OF CATEGORIES
NEDS/A6/FLG=A        EIS/FLG/1=          EIS/FLG/2=

---------------------------------------------------------------------------------------------------------------------------------------------

     STATE=06    COUNTY=1280    GEOGP/SUBALLOC/#=00000    CATEGRY/#=001    DISAGGR/#=00    RECORD/TYPE/(KEY)=1    LINE/#=000    BATCH=
AQCR=067  REC/TYPE=CA  CATEGRY/DESC=RESIDENT ANTHRACITE COAL    YR/OF/INFO=79  PRCSS/RATE=000040123  CATEGRY/ADJ=                 UNITS/CD=
UNITS/CD/DESC=                   UNIFRM/THRUPT=Y  MNTHLY/THRUPT/%: (JAN=08,FEB=08,MAR=09,APR=06,MAY=08,JUN=09,JUL=08,AUG=08,SEP=09,OCT=08
NOV=08,DEC=09)  HRS/PER/DAY=      DAYS/PER/WK=    WKS/PER/YR=     THRUPT/RATIO=        MAX/HRLY/THRUPT=                DATA/CONFIDENCE/RATNG=0
NITRG/%=          SULF/%=     ASH/%=       HEAT/CONT=          UNIFRM/HRLY/THRUPT=     HRLY/THRUPT/%: (00=  ,  ,  ,03=  ,  ,  ,06=  ,  ,  ,09=
  ,  ,12=  ,  ,  ,15=  ,  ,  ,18=  ,  ,  ,21=  ,  ,  )  NEDS/A7/COMM=MASTER FILE TEST DATA                      INFO/SOURCE/CODE=S
INFO/SRCF/MARK=                                 EIS/FLG/1=A  EIS/FLG/2=A  EIS/FLG/3=    EIS/FLG/4=A  NEDS/FLG=A  NEDS/A7/FLG=A  #/POLL=07
POLL/ID EMIS/FACTR EF/CNF/RTNG EF/SRC/CD EF/ORIG POLL/SPC/DATA NEDS/A7/EMIS    POLL/NAME      EIS/FLG/5 EMIS/EST CONF/RTNG MX/HRLY/EMS
11101                     0                    S                                PARTICULATES        A        0000000      0
42101                     0                    S                                CARBON MONOXIDE     A        0000000      0
42401                     0                    S                                SULFUR DIOXIDE      A        0000000      0
42602                     0                    S                                NITROGEN OXIDES     A        0000000      0
43101                     0                    S                                HYDROCARBONS        A        0000000      0
42269                     0                    L                                TOTAL SULFUR        A        0000000      0
43201                     0                    L                                METHANE             A        0000000      0
---------------------------------------------------------------------------------------------------------------------------------------------

     STATE=06    COUNTY=1280    GEOGP/SUBALLOC/#=00000    CATEGRY/#=002    DISAGGR/#=00    RECORD/TYPE/(KEY)=1    LINE/#=000    BATCH=
AQCR=067  REC/TYPE=CA  CATEGRY/DESC=RESIDENT BITUMINOUS COAL    YR/OF/INFO=79  PRCSS/RATE=000020010  CATEGRY/ADJ=                UNITS/CD=
UNITS/CD/DESC=                   UNIFRM/THRUPT=Y  MNTHLY/THRUPT/%: (JAN=08,FEB=06,MAR=09,APR=08,MAY=08,JUN=09,JUL=08,AUG=08,SEP=09,OCT=08
NOV=08,DEC=09)  HRS/PER/DAY=      DAYS/PER/WK=    WKS/PER/YR=     THRUPT/RATIO=        MAX/HRLY/THRUPT=                DATA/CONFIDENCE/RATNG=0
NITRG/%= 100  SULF/%=     ASH/%=000  HEAT/CONT=          UNIFRM/HRLY/THRUPT=     HRLY/THRUPT/%: (00=  ,  ,  ,03=  ,  ,  ,06=  ,  ,  ,09=
  ,  ,12=  ,  ,  ,15=  ,  ,  ,18=  ,  ,  ,21=  ,  ,  )  NEDS/A7/COMM=MASTER FILE TEST DATA                      INFO/SOURCE/CODE=S
INFO/SRCF/MARK=                                 EIS/FLG/1=A  EIS/FLG/2=A  EIS/FLG/3=    EIS/FLG/4=A  NEDS/FLG=A  NEDS/A7/FLG=A  #/POLL=06
POLL/ID EMIS/FACTR EF/CNF/RTNG EF/SRC/CD EF/ORIG POLL/SPC/DATA NEDS/A7/EMIS    POLL/NAME      EIS/FLG/5 EMIS/EST CONF/RTNG MX/HRLY/EMS
11101   0000002000        0                    S                                PARTICULATES        A        0000080      0
42101   0000000575        0                    S                                CARBON MONOXIDE     A        0000006      0
42401   0000006200        0                    S                                SULFUR DIOXIDE      A        0000000      0
42602   0000018000        0                    S                                NITROGEN OXIDES     A        0000019      0
43101   0000133000        0                    S                                HYDROCARBONS        A        0001331      0
43201   0000066500        0                    L                                METHANE             A        0000665      0
```

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Figure AST4-2 - continued. Sample Output

## EIS/AS Test 5

## Update the Master File Using EIS/AS Transactions

In this test run, the master file output from Test 3 is updated with EIS/AS transactions using three cataloged procedures. The first procedure is ECEDT10 which executes CEDMSTR (EC0040), the master file transaction edit program. The second procedure is ECMST10 which executes CSRINTR (EC0050), the master file internal transaction sort program; and CMSEFIN (EC0060), the master file internal transaction emission factor insertion program. The third procedure is ECFMM10 which executes CSRINTR (EC0050) and CFMMSTR (EC0070), the master file maintenance program.

This test is similiar to Test 3 in that both tests execute the same programs. However, unlike Test 3 which used one cataloged procedure to execute all the programs, this test run uses three procedures. By using separate procedures, the user can edit several different sets of input transactions and then perform a single emission factor insertion and file maintenance on all the edited transactions. This will result in operating cost savings. Refer to Test 3 for a description of CEDMSTR (EC0040) and to Test 2 for a description of CSRINTR (EC0050), CMSEFIN (EC0060) and CFMMSTR (EC0070).

The run stream for this test run contains the JCL needed to update an EIS/AS master file. This run stream is shown in Figure AST5-1. The sample output produced by this run stream is shown in Figure AST5-2.

First, the run stream executes the cataloged procedure ECEDT10. Through the use of substitutable parameters, the output internal transaction file is named ECINTR1. For the EDIT step, the user must supply the DD (data definition) information for the option card file and the input EIS/AS master file transaction file. The options specified in this step are 80 and FLAGW.

Next, the cataloged procedure ECMST10 is executed. Substitutable parameters are used to specify the input emission factor file as ECEMFL1 (created in Test 1), the input internal transaction file as ECINTR1 (created in the previous step), and the output internal transaction file as ECINTR2.

The user must supply the DD information for the option card file in the INSERT step. The options specified for this step are: FLAGW, NIT I, SUL I, ASH I, EMISSION I, CONF I, SPEC I, CDAT 75000, and PDAT 75000.

The last procedure to be executed is ECFMM10. By using substitutable parameters, the input master file is ECMSTR2 (created in Test 3), the input internal transaction file is ECINTR2 (created in the previous step), and the output master file is named ECMSTR3. The DD information for the option card file in the UDPATE step must be specified by the user. In this step the options are 80, FLAGW, and LIST.

```
//ASTESTOS JOB    (ACCOUNTING INFO)
//*
//*   UPDATE THE EIS/AS MASTER FILE USING EIS/AS TRANSACTIONS
//*
//TESTOSA EXEC ECEDT10,
//      INTRTRN=ECINTR1
//*
//*   EDIT THE EIS/AS TRANSACTIONS
//*
//EDIT.INPUT DD *
0612800670061100835                                                         SD1D
14804007400000                                                              CG1D
4213801980000000500                                                         CA1D
147840074000000100N05050585                 125500023     444444023412010034CA2C
1478400740000100001THIS IS COMMENT 1                                         H1A
147840074000000100N05050585                 125500023     444444023412010034CA2A
3100150110013510010                                                         CR1D
061280067                                                                    NOD

147840074000008000040134213SMITH COUNTY       INDUSTRY            1120788223CG1C
14784007400000011234512345678885120512345789654122235563226123455554        CG0C
14784007400000111011SP-1          U000123 42101CCI            A00023        CG7C
147840074000000100N05050585                 125500023     444444023412010034CA2A
147840074000000100N2020202020                                               CA3C
147860074000008000040134213GEORGE COUNTY      INDUSTRY            1120788223CG1C
14786007400000[illegible]25013700120345900119                                       CG5C
14786007400000 000123400014500201000419000580100001480001576                CG6C
14786007400000111011SP-1          U000123 42101CCI            A00023        CG7A
147860074000000300002HIS IS COMMENT 1                                        H1A
3100150110013510010                                 125     23              SD1C
310015011001351001011101     26100   1234                                   SD5C
3100150110036723401                                1597     10              SD1C
310015011003672340121101    351111   XXJ-12                                 SD5C
310015011003672340143101   1351001   XXJ-12        100                      SD5C
3100150110087686601                                   5    100              SD1C
3100150110087686666                                2000    312              SD1C
310015011008768666611101     26100   1234                                   SD5C
310015011008768666643101   1351001   XXJ-12        100                      SD5C
420680198000008000040134213GEORGE COUNTY      INDUSTRY            1120788223CG1C
420680198000000020124AQCR IS 198COUNTY        INDUSTRY            1120788223CG2C
420680198000015CAASF                1230102030812514504                     CG3A
420680198000015CAASF                1230102030812514504                     CG3C
4206801980000011114WINDBLN PART   U000451 22403SULFATES       A000241       CG7A
420680198000000100N05050585                 125500023     455554023412010034CA2C
420680198000000100N05050585                 125500023     444444023412010034CA2C
420680198000000100N2020202020                                               CA3C
0612800670000073079                                                         CG1A
//EDIT.OPTIONS DD *
80 FLAGW
//TESTOSB EXEC ECMST10,
//      EMFCFIL=ECFMFL1,
//      OLDINTR=ECINTR1,
//      NEWINTR=ECINTR2
//*
//*   INSERT EMISSION FACTORS IN THE INTERNAL TRANSACTIONS
//*   CREATED IN STEP A
//*
//INSERT.OPTIONS DD *
FLAGW  NIT I  SUL I  ASH I  EMISSION I  CONF I  SPEC I  CDAT 75000 PDAT 75000
//TESTOSC EXEC ECFMM10,
//      OLDMSTR=ECMSTR2,
```

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Figure AST5-1. Run Stream

```
//        NEWMSTR=FCMSTR3,
//        INTRTRN=FCINTR2
//*
//*    UPDATE THE MASTER FILE CREATED IN TEST 3 WITH THE
//*    INTERNAL TRANSACTIONS CREATED IN STEP 8 OF THIS
//*    TEST
//*
//UPDATE.OPTIONS DD *
NO FLAGW LIST
```

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Figure AST5-1 - continued. Run Stream

```
                                   EIS/AS TRANSACTION EDIT PROGRAM  -  DIAGNOSTIC REPORT                               PAGE      1
PROGRAM NAME: CEDMSTR (EC0040)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980

OPTIONS IN EFFECT: CONTROL YEAR 80   FLAGW     NOLIST
                                              (DEFAULT)

        *** CEDMSTR 004 CONDITIONAL - BLANK OR INVALID LIST OPTION, ASSUMING NOLIST

14784000740000000100N05050585                   125500023      44444402341201003 4CA2C
        *** CEDMSTR 013 ERROR - COUNTY WITH NONZERO SUBALLOCATION NUMBER, CARD REJECTED                       REF:       4

1478400740000000100001THIS IS COMMENT 1                                        R1A
                 B E                                                                                          REF:       5
        *** CEDMSTR 021 ERROR - COLUMN 20 - LINE NUMBER INVALID, CARD REJECTED

14784000740000000100N05050585                   125500023      444444023412010034CA2A
        *** CEDMSTR 013 ERROR - COUNTY WITH NONZERO SUBALLOCATION NUMBER, CARD REJECTED                       REF:       6


BEB  EB E                                                                                                     REF:       9
                                                                               BBB
        *** CEDMSTR 005 ERROR - COLUMN 80 - INVALID ACTION CODE, CARD REJECTED
        *** CEDMSTR 009 ERROR - COLUMN 01 - INVALID STATE CODE, CARD REJECTED
        *** CEDMSTR 010 ERROR - COLUMN 03 - INVALID COUNTY CODE, CARD REJECTED
        *** CEDMSTR 011 ERROR - COLUMN 07 - INVALID AQCR, CARD REJECTED
        *** CEDMSTR 006 ERROR - COLUMN 78 - INVALID, CARD REJECTED
        *** CEDMSTR 008 ERROR - COLUMN 79 - INVALID CARD NUMBER, CARD REJECTED

147840074000000011234512345678685120512345789654122235563226123455554         CG4C
           BE     B    EBE     B    EBE     B    EBE     B    EB                                          REF:      11
        *** CEDMSTR 064 CONDITIONAL - COLUMN 15 - UTM ZONE 3 OUT OF RANGE
        *** CEDMSTR 066 CONDITIONAL - COLUMN 21 - UTM VERTICAL 3 OUT OF RANGE
        *** CEDMSTR 070 CONDITIONAL - COLUMN 26 - UTM ZONE 4 OUT OF RANGE
        *** CEDMSTR 074 CONDITIONAL - COLUMN 32 - UTM VERTICAL 4 OUT OF RANGE
        *** CEDMSTR 076 CONDITIONAL - COLUMN 37 - UTM ZONE 5 OUT OF RANGE
        *** CEDMSTR 080 CONDITIONAL - COLUMN 43 - UTM VERTICAL 5 OUT OF RANGE
        *** CEDMSTR 082 CONDITIONAL - COLUMN 46 - UTM ZONE 6 OUT OF RANGE
        *** CEDMSTR 086 CONDITIONAL - COLUMN 54 - UTM VERTICAL 6 OUT OF RANGE
        *** CEDMSTR 087 ERROR - COLUMN 59 - SOURCE TYPE INVALID, REPLACING SPACE
4206801980000015CAASE                    12301020308125145O4                   CG3A                  REF:      31
                                                           BE
        *** CEDMSTR 052 CONDITIONAL - COLUMN 54 - UTM ZONE 1 OUT OF RANGE
4206601980000015CAASE                    123010203081251450 4                  CG3C                  REF:      32
                                                           BE
        *** CEDMSTR 052 CONDITIONAL - COLUMN 54 - UTM ZONE 1 OUT OF RANGE
```

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Figure AST5-2. Sample Output

```
                                   EIS/AS TRANSACTION EDIT PROGRAM  -  DIAGNOSTIC REPORT                              PAGE      2

NUMBER OF INPUT TRANSACTIONS:           37
NUMBER OF VALID TRANSACTIONS:           33
NUMBER OF REJECTED TRANSACTIONS:         4
NUMBER OF TRANSACTIONS WRITTEN:         33
NUMBER OF WARNING MESSAGES:              0
NUMBER OF CONDITIONAL MESSAGES:         11
NUMBER OF ERROR MESSAGES:               10
NUMBER OF ABORT MESSAGES:                0
NUMBER OF DISASTER MESSAGES:             0

PROGRAM NAME: EEDMSTR (EC0040)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980
```

```
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
```

```
                   EIS/AS MASTER FILE INTERNAL TRANSACTION SORT PROGRAM  -  DIAGNOSTIC REPORT                  PAGE      1


PROGRAM NAME: CSRINTR (EC0050)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980


NUMBER OF INPUT TRANSACTIONS READ:                           33
NUMBER OF TRANSACTIONS WRITTEN:                              34
```

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Figure AST5-2 - continued. Sample Output

```
                              EMISSION FACTOR INSERTION PROGRAM                                          PAGE   1

PROGRAM NAME: CMSEFIN (EC0060)
REVISION LEVEL:  1-00
LAST UPDATE #:  A-1
DATE INCORPORATED:  FEBRUARY 1, 1980


OPTIONS IN EFFECT:  FLAGW

        FIELDS SELECTED FOR INSERTIONS:  NIT  SUL  ASH  EMISSION  CONF  SPEC  CDAT 75000 PDAT 75000

        FIELDS TO BE OVERRIDDEN:  NONE


FLAGW   NIT I  SUL I  ASH I  EMISSION I  CONF I  SPEC I  CDAT 75000 PDAT 75000


        *** CMSEFIN 022 ERROR - NO VALID OVERRIDES SPECIFIED - NO OVERRIDES ASSUMED


NITROGEN I  N  SULFUR I  N  ASH I  N  EMISSION FACTOR I  N  CONF LEVEL I  N  SPEC DATA I  N    DATE: CATEGORY 75000  POLLUTANT 75000


        *** CMSEFIN 009 CONDITIONAL - EMISSION FACTOR FILE CONTAINS FEDERAL CATEGORY RECORDS FOR CATEGORIES OTHER THAN 1-64

147840  000000010010002 1CA074N050505850000000000000000012550002300000444444023412010034
        *** CMSEFIN 011 WARNING - NO MATCHING STATE OR LOCAL EMISSION FACTOR RECORD FOR CATEGORY 2 TRANS

310015  0013510010100052SD0111110100000026100    1234
        *** CMSEFIN 018 ERROR - UNFLAGGED INPUT CATEGORY-5 TRANSACTION
```

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Figure AST5-2 - continued. Sample Output

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```
                                    EMISSION FACTOR INSERTION PROGRAM                                         PAGE    3

NITROGEN I  N  SULFUR I  N  ASH I  N  EMISSION FACTOR I  N  CONF LEVEL I  N  SPEC DATA I  N    DATE: CATEGORY 75000  POLLUTANT 75000


NUMBER OF INPUT TRANSACTIONS:                     34
NUMBER OF EMISSION FACTOR RECORDS READ:          682
NUMBER OF STATE AND LOCAL INSERTIONS MADE:         0
NUMBER OF FEDERAL INSERTIONS MADE:                 3
NUMBER OF OUTPUT TRANSACTIONS:                    34



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             EIS/AS MASTER FILE INTERNAL TRANSACTION SORT PROGRAM  -  DIAGNOSTIC REPORT                PAGE     1

PROGRAM NAME: CSRINIR (EC0050)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980


NUMBER OF INPUT TRANSACTIONS READ:                            34
NUMBER OF TRANSACTIONS WRITTEN:                               35
```

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Figure AST5-2 - continued. Sample Output

```
                        EIS/AS MASTER FILE MAINTENANCE PROGRAM  -  DIAGNOSTIC MESSAGES                       PAGE    1
PROGRAM NAME: CFMMSTR (EC0070)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980

OPTION CARD

  CONTROL DATE IS 80   ,  ERROR OPTION IS FLAGW  ,  LIST OPTION IS LIST



147840     0000000100100021CA074N0505058500000000000000001255000230000044444023412010034
                              *** CFMMSTR 006 ERROR - ADD TRANSACTION, RECORD ALREADY ON MASTER FILE, CARD REJECTED

147860     0000000000000071CG074111011SP-1          0000123 42101C01            A00023
                              *** CFMMSTR 015 ERROR - DESCRIPTION POLLUTANT ID ALREADY ON FILE, POLLUTANT REJECTED
                              *** CFMMSTR 015 ERROR - DESCRIPTION POLLUTANT ID ALREADY ON FILE, POLLUTANT REJECTED

310015     001351001020010 R011
                              *** CFMMSTR 007 ERROR - TRANSACTION NOT ADD, BUT NO MASTER ON FILE, CARD REJECTED

420680     0000000000000031CG19815CAASE                123010203081251450 4
                              *** CFMMSTR 006 ERROR - ADD TRANSACTION, RECORD ALREADY ON MASTER FILE, CARD REJECTED

420680     0000000100100022CA198N05050585              1255000230000044444023412010034
                              *** CFMMSTR 007 ERROR - TRANSACTION NOT ADD, BUT NO MASTER ON FILE, CARD REJECTED

420680     0000000100100022CA198N05050585              1255000230000045555402341201003 4
                              *** CFMMSTR 007 ERROR - TRANSACTION NOT ADD, BUT NO MASTER ON FILE, CARD REJECTED

420680     0000000100100032CA198N2020202020
                              *** CFMMSTR 007 ERROR - TRANSACTION NOT ADD, BUT NO MASTER ON FILE, CARD REJECTED



- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

                        EIS/AS MASTER FILE MAINTENANCE PROGRAM  -  DIAGNOSTIC MESSAGES                       PAGE    2
   NUMBER OF INPUT TRANSACTIONS READ:                       34
   NUMBER OF DISASTERS DETECTED:                             0
   NUMBER OF ABORTS DETECTED:                                0
   NUMBER OF ERRORS DETECTED:                                8
   NUMBER OF CONDITIONALS DETECTED:                          0
   NUMBER OF WARNINGS DETECTED:                              0
   NUMBER OF TRANSACTIONS REJECTED:                          7
   NUMBER OF AREA SOURCE FILE RECORDS READ IN:             417
   NUMBER OF AREA SOURCE FILE RECORDS WRITTEN OUT:         420
```

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Figure AST5-2 - continued. Sample Output

```
                    EIS/AS MASTER FILE MAINTENANCE PROGRAM  -  INTERNAL TRANSACTION LISTING                       PAGE     1
00000000000000000000000000000000000000000000000000000000000000000000000000000000000
061280    000000000200000 N067
061280    0061100835100010SD067
147840    0000000000000012CG074800040134213SMITH COUNTY          INDUSTRY             1120788223
147840    0000000000000042CG07401123451234567888512051234578965412223556322 123455554
147840    0000000000000072CG07411101TSP-1            U000123 42101C01             A00023
147840    0000000100100021CA074N05050585000000000000000001255002300000444444023412010034
147840    0000000100100032CA074N2020202020
147860    0000000000000012CG074600040134213GEORGE COUNTY         INDUSTRY             1120788223
147860    0000000000000052CG07400125013700120345900119
147860    0000000000000062CG074 000123400014500201000419000560100001480001578
147860    0000000000000071CG07411101TSP-1            U000123 42101C01             A00023
147860    000000300200211 R074HIS IS COMMENT 1
148040    0000000000000010CG074
310015    0013510010100012SD011                             0000001250000023
310015    0013510010100052SD011111010000026100     1234
310015    0013510010200010 R011
310015    0036723401100012SD011                             0000015970000010
310015    0036723401100052SD011211010000351111     XXJ-12
310015    0036723401100052SD011431010001351001     XXJ-12    0000100
310015    0087686601100012SD011                             0000000050000100
310015    0087686666100012SD011                             0000020000000312
310015    0087686666100052SD011111010000026100     1234
310015    0087686666100052SD011431010001351001     XXJ-12    0000100
420680    0000000000000012CG198600040134213GEORGE COUNTY         INDUSTRY             1120788223
420680    0000000000000022CG19800020124AUCK IS 198COUNTY         INDUSTRY             1120788223
420680    0000000000000031CG19815CAASE                 1230102030812514504
420680    0000000000000032CG19815CAASE                 1230102030812514504
420680    0000000000000071CG19811114WINDHLN PART     U000451 22403SULFATES        A000241
420680    0000000100100022CA198N05050565                  12550002300000444444023412010034
420680    0000000100100022CA198N05050585                  12550002300000455554023412010034
420680    0000000100100032CA198N2020202020
421380    0000000500100010CA198
461280    0000000000000011CG06773079
```

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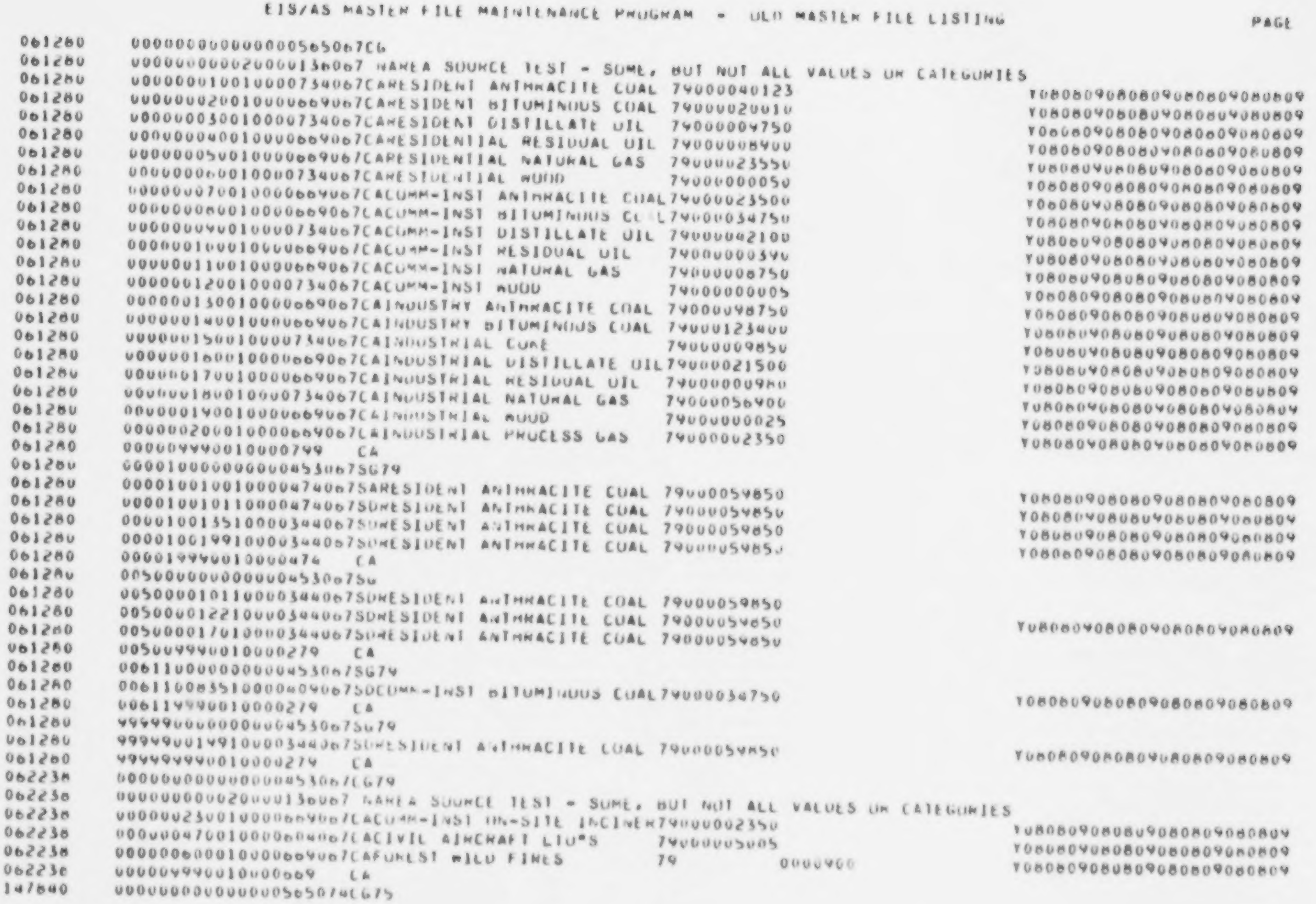
Figure AST5-2 - continued. Sample Output



```
                              EIS/AS MASTER FILE MAINTENANCE PROGRAM  -  OLD MASTER FILE LISTING                                PAGE     1
061280    0000000000000000565067C6
061280    0000000000020000136067 NAREA SOURCE TEST - SOME, BUT NOT ALL VALUES OR CATEGORIES
061280    000000010010000734067CARESIDENT ANTHRACITE COAL 79000040123                       Y080809080809080809080809
061280    000000020010000669067CARESIDENT BITUMINOUS COAL 79000020010                       Y080809080809080809080809
061280    000000030010000734067CARESIDENT DISTILLATE OIL  79000004750                       Y080809080809080809080809
061280    000000040010000669067CARESIDENTIAL RESIDUAL OIL 79000008900                       Y080809080809080809080809
061280    000000050010000669067CARESIDENTIAL NATURAL GAS  79000023550                       Y080809080809080809080809
061280    000000060010000734067CARESIDENTIAL WOOD         79000000050                       Y080809080809080809080809
061280    000000070010000669067CACOMM-INST ANTHRACITE COAL79000023500                       Y080809080809080809080809
061280    000000080010000669067CACOMM-INST BITUMINOUS COAL79000034750                       Y080809080809080809080809
061280    000000090010000734067CACOMM-INST DISTILLATE OIL 79000042100                       Y080809080809080809080809
061280    000000100010000669067CACOMM-INST RESIDUAL OIL   79000000390                       Y080809080809080809080809
061280    000000110010000669067CACOMM-INST NATURAL GAS    79000008750                       Y080809080809080809080809
061280    000000120010000734067CACOMM-INST WOOD           79000000005                       Y080809080809080809080809
061280    000000130010000669067CAINDUSTRY ANTHRACITE COAL 79000098750                       Y080809080809080809080809
061280    000000140010000669067CAINDUSTRY BITUMINOUS COAL 79000123400                       Y080809080809080809080809
061280    000000150010000734067CAINDUSTRIAL COKE          79000009850                       Y080809080809080809080809
061280    000000160010000669067CAINDUSTRIAL DISTILLATE OIL79000021500                       Y080809080809080809080809
061280    000000170010000669067CAINDUSTRIAL RESIDUAL OIL  79000000980                       Y080809080809080809080809
061280    000000180010000734067CAINDUSTRIAL NATURAL GAS   79000056900                       Y080809080809080809080809
061280    000000190010000669067CAINDUSTRIAL WOOD          79000000025                       Y080809080809080809080809
061280    000000200010000669067CAINDUSTRIAL PROCESS GAS   79000002350                       Y080809080809080809080809
061280    000009990010000799    CA
061280    0000100000000000453067SG79
061280    000010010010000474067SARESIDENT ANTHRACITE COAL 79000059850                       Y080809080809080809080809
061280    000010010110000474067SDRESIDENT ANTHRACITE COAL 79000059850                       Y080809080809080809080809
061280    000010013510000344067SDRESIDENT ANTHRACITE COAL 79000059850                       Y080809080809080809080809
061280    000010019910000344067SDRESIDENT ANTHRACITE COAL 79000059850                       Y080809080809080809080809
061280    000019990010000474    CA
061280    0050000000000000453067S0
061280    005000010110000344067SDRESIDENT ANTHRACITE COAL 79000059850
061280    005000012210000344067SDRESIDENT ANTHRACITE COAL 79000059850                       Y080809080809080809080809
061280    005000017010000344067SDRESIDENT ANTHRACITE COAL 79000059850
061280    005009990010000279    CA
061280    0061100000000000453067SG79
061280    006110083510000409067SDCOMM-INST BITUMINOUS COAL79000034750                       Y080809080809080809080809
061280    006119990010000279    CA
061280    9999000000000000453067SG79
061280    999900149100003440 67SDRESIDENT ANTHRACITE COAL 79000059850                       Y080809080809080809080809
061280    999999990010000279    CA
062238    0000000000000000453067CG79
062238    0000000000020000136067 NAREA SOURCE TEST - SOME, BUT NOT ALL VALUES OR CATEGORIES
062238    000002300100000669067CACOMM-INST ON-SITE INCINER79000002350                       Y080809080809080809080809
062238    000004700100000604067CACIVIL AIRCRAFT LTO*S     79000005005                       Y080809080809080809080809
062238    000006000100000669067CAFOREST WILD FIRES        79          0000900               Y080809080809080809080809
062238    000009990010000069    CA
147840    0000000000000000565074C675
```

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Figure AST5-2 - continued. Sample Output

```
                FIS/AS MASTER FILE MAINTENANCE PROGRAM  -  NEW MASTER FILE LISTING                          PAGE    1
061280    00000000000000000565067LE
061280    000000000020000136067 N.
061280    000000010010000734067CARESIDENT ANTHRACITE COAL 74000000123                    Y0R0R090R0R090R0R090R0R09
061280    000000020010000684067CARESIDENT BITUMINOUS COAL 74000020010                    Y0R0R090R0R090R0R090R0R09
061280    000000030010000734067CARESIDENT DISTILLATE OIL  74000004750                    Y0R0R090R0R090R0R090R0R09
061280    000000040010000684067CARESIDENTIAL RESIDUAL OIL 74000008900                    Y0R0R090R0R090R0R090R0R09
061280    000000050010000684067CARESIDENTIAL NATURAL GAS  74000023550                    Y0R0R090R0R090R0R090R0R09
061280    000000060010000734067CARESIDENTIAL WOOD         74000000050                    Y0R0R090R0R090R0R090R0R09
061280    000000070010000684067CACOMM-INST ANTHRACITE COAL74000023500                    Y0R0R090R0R090R0R090R0R09
061280    000000080010000684067CACOMM-INST BITUMINOUS COAL74000034750                    Y0R0R090R0R090R0R090R0R09
061280    000000090010000734067CACOMM-INST DISTILLATE OIL 74000042100                    Y0R0R090R0R090R0R090R0R09
061280    000000100010000689067CACOMM-INST RESIDUAL OIL   74000000890                    Y0R0R090R0R090R0R090R0R09
061280    000000110010000684067CACOMM-INST NATURAL GAS    74000006750                    Y0R0R090R0R090R0R090R0R09
061280    000000120010000734067CACOMM-INST WOOD           79000000005                    Y0R0R090R0R090R0R090R0R09
061280    000000130010000684067CAINDUSTRY ANTHRACITE COAL 74000098750                    Y0R0R090R0R090R0R090R0R09
061280    000000140010000684067CAINDUSTRY BITUMINOUS COAL 79000123000                    Y0R0R090R0R090R0R090R0R09
061280    000000150010000734067CAINDUSTRIAL COKE          74000094850                    Y0R0R090R0R090R0R090R0R09
061280    000000160010000684067CAINDUSTRIAL DISTILLATE OIL74000021500                    Y0R0R090R0R090R0R090R0R09
061280    000000170010000684067CAINDUSTRIAL RESIDUAL OIL  74000000980                    Y0R0R090R0R090R0R090R0R09
061280    000000180010000734067CAINDUSTRIAL NATURAL GAS   74000056900                    Y0R0R090R0R090R0R090R0R09
061280    000000190010000684067CAINDUSTRIAL WOOD          74000000025                    Y0R0R090R0R090R0R090R0R09
061280    000000200010000694067CAINDUSTRIAL PROCESS GAS   74000002350                    Y0R0R090R0R090R0R090R0R09
061280    000009990010000794   CA
061280    000010000000000453067SG79
061280    000010010010000474067SDRESIDENT ANTHRACITE COAL 74000059850                    Y0R0R090R0R090R0R090R0R09
061280    000010010110000474067SDRESIDENT ANTHRACITE COAL 74000059850                    Y0R0R090R0R090R0R090R0R09
061280    000010011510000384067SDRESIDENT ANTHRACITE COAL 74000059850                    Y0R0R090R0R090R0R090R0R09
061280    000010019910000384067SDRESIDENT ANTHRACITE COAL 74000059850                    Y0R0R090R0R090R0R090R0R09
061280    000019990010000474   CA
061280    0050000000000000453067SG
061280    005000101110000384067SDRESIDENT ANTHRACITE COAL 74000059850
061280    005000122100000384067SDRESIDENT ANTHRACITE COAL 74000059850                    Y0R0R090R0R090R0R090R0R09
061280    005000017010000384067SDRESIDENT ANTHRACITE COAL 74000059850
061280    005009990010000384   CA
061280    006110000000000453067SG79
061280    006110003510000406067SDCOMM-INST BITUMINOUS COAL74*          *                 Y0R0R090R0R090R0R090R0R09
061280    006119990010000384   CA
061280    999900000000000453067SG79
061280    999900199100000384067SDRESIDENT ANTHRACITE COAL 74000059850                    Y0R0R090R0R090R0R090R0R09
061280    999999990010000384   CA
06223B    0000000000000000453067CG79
06223B    000000000020000136067 NAREA SOURCE TEST - SOME, BUT NOT ALL VALUES OR CATEGORIES
06223B    000000230010000684067CACOMM-INST ON-SITE INCINER79000002350                    Y0R0R090R0R090R0R090R0R09
06223B    000000470010000604067CACIVIL AIRCRAFT LTO'S     74000005005                    Y0R0R090R0R090R0R090R0R09
06223B    000000600010000684067CAFOREST WILD FIRES        74          000000             Y0R0R090R0R090R0R090R0R09
06223B    000009990010000684   CA
147840    0000000000000000585074CG000040134213SMITH COUNTY        INDUSTRY          1120788823
```

(Page 8 of 8)

Figure AST5-2 - continued. Sample Output

## EIS/AS Test 6

## Submit Annual Report in NEDS Format

In this test run, data from the EIS/AS master file can be submitted to NEDS by generating NEDS area source transactions. The cataloged procedure ECRPM10 is used to execute CRPASNA (EC0120), the annual report program.

CRPASNA (EC0120) generates the annual report from the EIS/AS master file. This report consists of transactions which contain the information in the master file that has been added, changed, or deleted since the last execution of this program. These transactions can be generated in either the NEDS area source transaction format or the EIS/AS internal transaction format.

The option card for CRPASNA (EC0120) provides the user with three options: a transaction option, a warning option, and a list option. The transaction option allows the user to choose which type of transactions are to be generated (NEDS area source or EIS/AS internal transactions). By specifying NEDS in columns 1 through 4 of the option card, the program will generate NEDS area source transactions. In order to generate EIS/AS internal transactions, the user must specify AREA in columns 1 through 4 of the option card. If this field is left blank or if the option is specified incorrectly, program execution will be terminated.

The warning option allows the user to suppress the printing of warning messages. In order to suppress warning messages, the user must code NOFLAGW in columns 6 through 12 of the option card. If this field is left blank or if the option is specified incorrectly, the program will assume a default of NOFLAGW. If the user does not want to suppress warning messages, he must code FLAGW in columns 6 through 10 and leave columns 11 and 12 blank.

The list option allows the user to obtain listings of the input master file, the output master file, and the generated transactions. These listings are useful for confirming that the appropriate data has been submitted to NEDS and for diagnosing potential errors. To obtain listings, the user must code LIST in columns 14 through 17 of the option card and leave columns 18 and 19 blank. To suppress the listings, the user must code NOLIST in columns 14 through 19 of the option card. If this field is left blank or if the option is specified incorrectly, the program will assume a default of NOLIST.

The output EIS/AS master file differs from the input master file in that the status flags have been set to reflect the new submission status of all the records. The output master file might contain fewer records than the input master file since some records may have been deleted.

The output transaction file, whether it be NEDS or EIS/AS internal transactions, contains only data which have been added, changed, or deleted since the last execution of CRPASNA (EP0120). Add transactions are generated when records have been added to the master file. Change transactions are generated when a data field in an existing record has been added, changed, or deleted. If a data field is to be deleted, the change transaction will contain an asterisk in the first position of the corresponding transaction field. Delete transactions are generated when an entire record has been flagged for deletion in the master file.

The run stream for this test run contains the JCL needed for converting data from the EIS/AS master file into NEDS area source transactions for submission to NEDS. This run stream is shown in Figure AST6-1.

The cataloged procedure executed by this run stream is ECRPM10. By using substitutable parameters, the input master file is specified as ECMSTR3 (created in Test 5), the output master file is named ECMSTR4, and the output NEDS transaction file is named ECNEDS1. The user must supply the DD (data definition) information for the option card file in the REPORT step. The options specified in this test run are NEDS, FLAGW, and LIST. Notice that when NEDS transactions are being generated the EIS/AS internal transaction file ECSASTR must be a dummy file in the REPORT step. The sample output produced by this run stream is shown in Figure AST6-2.

```
//ASTEST06 JOB     (ACCOUNTING INFO)
//*
//*   SUBMIT ANNUAL REPORT TO NEDS USING NEDS TRANSACTIONS
//*
//TEST06A EXEC ECRPM10,
//        OLDMSTR=ECMSTR3,
//        NEWMSTR=ECMSTR0,
//        TRANFL1=ECNEDS1
//*
//*   GENERATE NEDS TRANSACTIONS FOR ANNUAL REPORT
//*
//REPORT.ECSASTR DD DUMMY
//REPORT.OPTIONS DD *
NEDS FLAG   LIST
```

Figure AST6-1. Run Stream

```
                                    EIS/AS ANNUAL REPORT PROGRAM  -  DIAGNOSTIC REPORT                                  PAGE    1

PROGRAM NAME: CHPASNA (EC0120)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980


OPTIONS IN EFFECT: NEDS, FLAGM  , LIST


INPUT EIS/AS MASTER FILE COUNT:                   420
OUTPUT EIS/AS MASTER FILE COUNT:                  371
RECORDS DELETED FROM MASTER FILE:                  49
NEDS TRANSACTIONS GENERATED:                       88
   ADD TRANSACTIONS COUNT:                         88
   CHANGE TRANSACTIONS COUNT:                       0
   DELETE TRANSACTIONS COUNT:                       0
NUMBER OF ERROR MESSAGES:                           0
NUMBER OF WARNING MESSAGES:                         0
NUMBER OF CONDITIONAL MESSAGES:                     0
NUMBER OF ABORT MESSAGES:                           0
NUMBER OF DISASTER MESSAGES:                        0
```

(Page 1 of 4)

Figure AST6-2. Sample Output

```
                                   INPUT EIS/AS MASTER FILE                                                    PAGE    1

061280    0000000000000000565067CG
061280    0000000000020000136067 NA
061280    000000010010000734067CARESIDENT ANTHRACITE COAL 79000040123                          Y0R0R090R0R090R0R090R0R09
061280    000000020010000669067CARESIDENT BITUMINOUS COAL 79000020010                          Y0R0R090R0R090R0R090R0R09
061280    000000030010000734067CARESIDENT DISTILLATE OIL  79000009750                          Y0R0R090R0R090R0R090R0R09
061280    000000040010000669067CARESIDENTIAL RESIDUAL OIL 79000008900                          Y0R0R090R0R090R0R090R0R09
061280    000000050010000669067CARESIDENTIAL NATURAL GAS  79000023550                          Y0R0R090R0R090R0R090R0R09
061280    000000060010000734067CARESIDENTIAL WOOD         79000000050                          Y0R0R090R0R090R0R090R0R09
061280    000000070010000669067CACOMM-INST ANTHRACITE COAL79000023500                          Y0R0R090R0R090R0R090R0R09
061280    000000080010000669067CACOMM-INST BITUMINOUS COAL79000034750                          Y0R0R090R0R090R0R090R0R09
061280    000000090010000734067CACOMM-INST DISTILLATE OIL 79000042100                          Y0R0R090R0R090R0R090R0R09
061280    000000100010000669067CACOMM-INST RESIDUAL OIL   79000000390                          Y0R0R090R0R090R0R090R0R09
061280    000000110010000669067CACOMM-INST NATURAL GAS    79000008750                          Y0R0R090R0R090R0R090R0R09
061280    000000120010000734067CACOMM-INST WOOD           79000000005                          Y0R0R090R0R090R0R090R0R09
061280    000000130010000669067CAINDUSTRY ANTHRACITE COAL 79000098750                          Y0R0R090R0R090R0R090R0R09
061280    000000140010000669067CAINDUSTRY BITUMINOUS COAL 79000123400                          Y0R0R090R0R090R0R090R0R09
061280    000000150010000734067CAINDUSTRIAL COKE          79000009850                          Y0R0R090R0R090R0R090R0R09
061280    000000160010000669067CAINDUSTRIAL DISTILLATE OIL79000021500                          Y0R0R090R0R090R0R090R0R09
061280    000000170010000669067CAINDUSTRIAL RESIDUAL OIL  79000000980                          Y0R0R090R0R090R0R090R0R09
061280    000000180010000734067CAINDUSTRIAL NATURAL GAS   79000056900                          Y0R0R090R0R090R0R090R0R09
061280    000000190010000669067CAINDUSTRIAL WOOD          79000000025                          Y0R0R090R0R090R0R090R0R09
061280    000000200010000669067CAINDUSTRIAL PROCESS GAS   79000002350                          Y0R0R090R0R090R0R090R0R09
061280    00009990010000799   CA
061280    000100000000000453067SG79
061280    00010010010000474067SARESIDENT ANTHRACITE COAL 79000059850                           Y0R0R090R0R090R0R090R0R09
061280    00010010110000474067SDRESIDENT ANTHRACITE COAL 79000059850                           Y0R0R090R0R090R0R090R0R09
061280    00010013510000344067SDRESIDENT ANTHRACITE COAL 79000059850                           Y0R0R090R0R090R0R090R0R09
061280    00010019910000344067SDRESIDENT ANTHRACITE COAL 79000059850                           Y0R0R090R0R090R0R090R0R09
061280    00019990010000474   CA
061280    005000000000000453067SG
061280    00500001011000344067SDRESIDENT ANTHRACITE COAL 7900005985                            Y0R0R090R0R090R0R090R0R09
061280    00500001221000344067SDRESIDENT ANTHRACITE COAL 79000059850
061280    00500001701000344067SDRESIDENT ANTHRACITE COAL 79000059850
061280    00509990010000344   CA
061280    006110000000000453067SG79
061280    00611008351000409067SDCOMM-INST BITUMINOUS COAL79*           *                       Y0R0R090R0R090R0R090R0R09
061280    00611999001000344   CA
061280    999900000000000453067SG79
061280    99990019410000344067SDRESIDENT ANTHRACITE COAL 79000059850                           Y0R0R090R0R090R0R090R0R09
061280    99999990010000344   CA
062238    0000000000000000453067CG79
062238    0000000000020000136067 NAREA SOURCE TEST - SOME, BUT NOT ALL VALUES OR CATEGORIES
062238    000000230010000669067CACOMM-INST ON-SITE INCINER79000002350                          Y0R0R090R0R090R0R090R0R09
062238    000000470010000604067CACIVIL AIRCRAFT LTO*S     79000005005                          Y0R0R090R0R090R0R090R0R09
062238    000000600010000669067CAFOREST WILD FIRES        79           0000900                 Y0R0R090R0R090R0R090R0R09
062238    000009990010000669   CA
147840    000000000000000565074CG800040134213SMITH COUNTY        INDUSTRY           1120768223
147840    0000000000020000136074 NAWABASH
147840    000000010010000604074CARESIDENT ANTHRACITE COAL   000000001
147840    000000020010000604074CARESIDENT BITUMINOUS COAL   000000101
147840    000000030010000604074CARESIDENT DISTILLATE OIL    000000137
147840    000000050010000604074CARESIDENTIAL NATURAL GAS    000000042
```

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Figure AST6-2 - continued. Sample Output

```
                                                       OUTPUT FIS/AS MASTER FILE                                                  PAGE   1

0612R0   0000000000000000565067CG
0612R0   000000010010000734067CARESIDENT ANTHRACITE COAL 79000040123                     Y0R0R090R0R090R0R090R0R09
0612R0   000000020010000669067CARESIDENT BITUMINOUS COAL 79000020010                     Y0R0R090R0R090R0R090R0R09
0612R0   000000030010000734067CARESIDENT DISTILLATE OIL  79000009750                     Y0R0R090R0R090R0R090R0R09
0612R0   000000040010000669067CARESIDENTIAL RESIDUAL OIL 79000008900                     Y0R0R090R0R090R0R090R0R09
0612R0   000000050010000669067CARESIDENTIAL NATURAL GAS  79000023550                     Y0R0R090R0R090R0R090R0R09
0612R0   000000060010000734067CARESIDENTIAL WOOD         79000000050                     Y0R0R090R0R090R0R090R0R09
0612R0   000000070010000669067CACOMM-INST ANTHRACITE COAL79000023500                     Y0R0R090R0R090R0R090R0R09
0612R0   000000080010000669067CACOMM-INST BITUMINOUS COAL79000034750                     Y0R0R090R0R090R0R090R0R09
0612R0   000000090010000734067CACOMM-INST DISTILLATE OIL 79000042100                     Y0R0R090R0R090R0R090R0R09
0612R0   000000100010000669067CACOMM-INST RESIDUAL OIL   79000000390                     Y0R0R090R0R090R0R090R0R09
0612R0   000000110010000669067CACOMM-INST NATURAL GAS    79000000750                     Y0R0R090R0R090R0R090R0R09
0612R0   000000120010000734067CACOMM-INST WOOD           79000000005                     Y0R0R090R0R090R0R090R0R09
0612R0   000000130010000669067CAINDUSTRY ANTHRACITE COAL 79000096750                     Y0R0R090R0R090R0R090R0R09
0612R0   000000140010000669067CAINDUSTRY BITUMINOUS COAL 79000123400                     Y0R0R090R0R090R0R090R0R09
0612R0   000000150010000734067CAINDUSTRIAL COKE          79000009850                     Y0R0R090R0R090R0R090R0R09
0612R0   000000160010000669067CAINDUSTRIAL DISTILLATE OIL79000021500                     Y0R0R090R0R090R0R090R0R09
0612R0   000000170010000669067CAINDUSTRIAL RESIDUAL OIL  79000000980                     Y0R0R090R0R090R0R090R0R09
0612R0   000000180010000734067CAINDUSTRIAL NATURAL GAS   79000056900                     Y0R0R090R0R090R0R090R0R09
0612R0   000000190010000669067CAINDUSTRIAL WOOD          79000000025                     Y0R0R090R0R090R0R090R0R09
0612R0   000000200010000669067CAINDUSTRIAL PROCESS GAS   79000002350                     Y0R0R090R0R090R0R090R0R09
0612R0   000009990010000799    CA
0612R0   0000100000000000453067SG79
0612R0   000010010010000474067SARESIDENT ANTHRACITE COAL 79000059850                     Y0R0R090R0R090R0R090R0R09
0612R0   000010010110000474067SDRESIDENT ANTHRACITE COAL 79000059850                     Y0R0R090R0R090R0R090R0R09
0612R0   000010013510000344067SDRESIDENT ANTHRACITE COAL 79000059850                     Y0R0R090R0R090R0R090R0R09
0612R0   000010019910000344067SDRESIDENT ANTHRACITE COAL 79000059850                     Y0R0R090R0R090R0R090R0R09
0612R0   000019990010000474    CA
0612R0   0050000000000000453067SG
0612R0   005000010110000344067SDRESIDENT ANTHRACITE COAL 79000059850
0612R0   005000012210000344067SDRESIDENT ANTHRACITE COAL 79000059850                     Y0R0R090R0R090R0R090R0R09
0612R0   005000017010000344067SDRESIDENT ANTHRACITE COAL 79000059850
0612R0   005009990010000344    CA
0612R0   0061100000000000453067SG79
0612R0   006119990010000344    CA
0612R0   9999000000000000453067SG79
0612R0   99990019910000344067SDRESIDENT ANTHRACITE COAL 79000059850                      Y0R0R090R0R090R0R090R0R09
0612R0   999909990010000344    CA
062238   0000000000000000453067CG79
062238   000000000020000136067 NAREA SOURCE TEST - SUM , BUT NOT ALL VALUES OR CATEGORIES
062238   000000230010000669067CACOMM-INST ON-SITE INCINER79000002350                     Y0R0R090R0R090R0R090R0R09
062238   000000470010000604067CACIVIL AIRCRAFT LTO*S     79000005005                     Y0R0R090R0R090R0R090R0R09
062238   000000600010000669067CAFOREST WILD FIRES        79          0000900             Y0R0R090R0R090R0R090R0R09
062238   000009990010000669    CA
147840   0000000000000000565074CG800040134213SMITH COUNTY          INDUSTRY           1120788223
147840   000000000020000136074 NWABASH
147840   000000010010000604074CARESIDENT ANTHRACITE COAL   000000001
147840   000000020010000604074CARESIDENT BITUMINOUS COAL   000000101
147840   000000030010000604074CARESIDENT DISTILLATE OIL    000000137
147840   000000050010000604074CARESIDENTIAL NATURAL GAS    000000042
147840   000000080010000604074CACOMM-INST BITUMINOUS COAL  000000003
147840   000000090010000604074CACOMM-INST DISTILLATE OIL   000000023
```

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Figure AST6-2 - continued. Sample Output

```
                                                GENERATED NEDS TRANSACTIONS                                           PAGE    1

061280067                                       00123020010097508900235500050AA1
0612800672350034750421000039087500509875012340098502150000980569000252350    AA2
0612800677901                              MASTER FILE TEST DATA             AA7
0612800677902                              MASTER FILE TEST DATA             AA7
0612800677903                              MASTER FILE TEST DATA             AA7
0612800677904                              MASTER FILE TEST DATA             AA7
0612800677905                              MASTER FILE TEST DATA             AA7
0612800677906                              MASTER FILE TEST DATA             AA7
0612800677907                              MASTER FILE TEST DATA             AA7
0612800677908                              MASTER FILE TEST DATA             AA7
0612800677909                              MASTER FILE TEST DATA             AA7
0612800677910                              MASTER FILE TEST DATA             AA7
0612800677911                              MASTER FILE TEST DATA             AA7
0612800677912                              MASTER FILE TEST DATA             AA7
0612800677913                              MASTER FILE TEST DATA             AA7
0612800677914                              MASTER FILE TEST DATA             AA7
0612800677915                              MASTER FILE TEST DATA             AA7
0612800677916                              MASTER FILE TEST DATA             AA7
0612800677917                              MASTER FILE TEST DATA             AA7
0612800677918                              MASTER FILE TEST DATA             AA7
0612800677919                              MASTER FILE TEST DATA             AA7
0612800677920                              MASTER FILE TEST DATA             AA7
0622380677911111333334444400002222233221144555666                            AA1
0622380677911111333334444400002222233221144555666                            AA1
062238067          2350                  0009876            950005           AA3
062238067   005005                                 0097500005032100009875012AA4
062238067                                  900                               AA5
062238067AREA SOURCE TEST - SOME, BUT NOT ALL VALUES OR CATEGORIES           AA6
0622380677923                              MASTER FILE TEST DATA             AA7
0622380677947                              MASTER FILE TEST DATA             AA7
0622380677960                              MASTER FILE TEST DATA             AA7
1478400748000197000300100001500055063803110930930000100010100137    00042    AA1
147840074    0000300023000310012         000037    000110003000007           AA2
147840074000947                          000567100081000065200082600001001216AA3
147840074   000365                 026700052500089      003096      0005303AA4
147840074000005     0000870009900224          012                        00052AA5
147840074WABASH                                                              AA6
147840074  01000300002000015000025000040000A7 EMISSION RECORDED              AA7
147840074  43000020000080000620000000000092ESTIMATES USED FOR A7-EMISSIONS   AA7
147840074  49000300002000015000025000040000A7 EMISSION RECORDED              AA7
1478600748000125013700120345900119063803110930930000100008100183    00096    AA1
147860074    0000400034000450025         000281    000620017000023           AA2
147860074001467                          001234000145000118402010000003003140AA3
147860074   000767                 00600005670020704190058010000148000157 8AA4
147860074000030     0001670028500649          012                        00080AA5
147860074WARREN                                                              AA6
147860074  140003000002100015102025000120000A7 EMISSION RECORDED             AA7
147860074  43000120000500003700000000000055ESTIMATES USED FOR A7-EMISSIONS   AA7
147860074  640003000002100015102025000120000A7 EMISSION RECORDED             AA7
31001501179                                                                  AA1
42068019800130006000900240002290001020306125185      0000500099    000130089AA1
420680198    00011                 0001                 00006     00001      AA2
```

(Page 4 of 4)

Figure AST6-2 - continued. Sample Output

## EIS/AS Test 7

## Retrieve a Standard Answer File Using the COBOL Language and Produce a Detailed Report of the Answer File

In this test run, a standard answer file is retrieved from the EIS/AS master file using the cataloged procedure ECRTM30. This procedure executes CRTLNGP (EC0090), the retrieval language processor program; the COBOL compiler; the linkage editor; and the generated retrieval program, CRTGENR (EC0100). A detailed report of the answer file is produced by using the cataloged procedure ECRPM20 which executes CRPMSTR (EC0130), the master file detailed report program.

CRTLNGP (EC0090) is the first of two EIS/AS programs used to retrieve data from the EIS/AS master file. The second program is CRTGENR (EC0100), the program generated by CRTLNGP (EC0090).

CRTLNGP (EC0090) uses the retrieval skeleton program CRTSKEL, which is stored in a cataloged source library, and the user-supplied retrieval specification cards to build CRTGENR (EC0100), which is referred to as the generated retrieval program.

The retrieval specification cards consist of retrieval control cards and retrieval request cards. The control cards indicate the beginning and end of the retrieval specifications: a $$SELECT card indicates the beginning of the retrieval specifications and a $$END card indicates the end of the retrieval specifications. Retrieval request cards follow the $$SELECT card and can be written in either the EIS/AS retrieval language or in COBOL. These cards precisely identify the data to be retrieved from the master file. When the EIS/AS retrieval language is used, up to 10 retrievals can be batched in one run, by preceding each retrieval by a $$SELECT card and entering a $$END card after the last retrieval.

The options allowed for CRTLNGP (EC0090) are entered on the first $$SELECT retrieval control card. The options specify whether the requests are written in the EIS/AS retrieval language or in COBOL, and whether or not description, category, or comment records are to be retrieved. The format of the retrieval control cards is illustrated in Figure AST7-1 and the definitions of the EIS/AS retrieval control card fields are provided in Figure AST7-2.

When the EIS/AS retrieval language is used, the user is allowed to select records from the EIS/AS master file based upon the value of specific fields in the master file records. The data names which can be used for these EIS/AS retrieval language requests are listed in Figure AST7-3. The EIS/AS retrieval language specifications are written in the format described in Figure AST7-4 and Figure AST7-5 provides definitions of the EIS/AS retrieval language specification fields. The EIS/AS retrieval specification load sheets are provided in Figure AST7-6.

If the COBOL language is used, the retrieval request cards are prepared according to COBOL rules for syntax and punctuation. Any retrieval that can be run using the EIS/AS retrieval language can also be run by specifying USER as the language keyword (see Figure AST7-1) and using the COBOL language, but, nothing is gained in these retrievals by using COBOL when the EIS/AS retrieval language can be used. There are some retrievals which cannot be accomplished using the EIS/AS retrieval language. This is when COBOL retrievals become very beneficial. In addition to this test, Test 16 also demonstrates the use of COBOL retrievals.

CRTGENR (EC0100) is produced based on the retrieval specifications entered into CRTLNGP (EC0090). This generated retrieval program must be compiled and link edited before it is executed. When it is executed, it reads the EIS/AS master file and selects those records which satisfy the retrieval specifications that were entered into CRTLNGP (EC0090). The selected records are written to an output file which is referred to as an EIS/AS answer file. This file is only a subset of the master file; any changes made to the answer file during the retrieval process are not reflected in the master file. The answer file has the same format as the EIS/AS master file and may be used as input to any EIS/AS program which uses the master file as input.

This test demonstrates how the user can resubmit data from the EIS/AS master file to NEDS even though the flags in the master file indicate that the data has already been sent to NEDS. The status flags in the answer file produced by this retrieval have been set to A to indicate that the data has not been sent to NEDS. Now, the answer file can be input to CRPASNA (EC0120) and the annual report can be submitted again (see Test 8).

CRPMSTR (EC0130) produces a detailed report of the EIS/AS master file. Each field in each master file record appears under an identifying heading. This report may be used as a management report or in verifying data in the master file.

The maximum number of lines per printed page can be specified by the user in card columns one and two of the option card. This option can reduce the amount of paper used by those users who have standard 11 x 14 inch output forms and the ability to print eight lines per inch. If no option card is given or the line specification on the option card is not between 20 and 85 a default of 60 lines is used.

The run stream for this test run contains the JCL necessary for retrieving a standard answer file from an EIS/AS master file. This run stream is shown in Figure AST7-7 and the sample output produced by this run stream is shown in Figure AST7-8.

The first cataloged procedure executed by this run stream is ECRTM30. Through the use of substitutable parameters, the input master file is specified as ECMSTR4 (created in Test 6) and the output answer file is named ECMSTR5. Also, note that the output answer file will be cataloged. The user must supply the appropriate DD (data definition) information for the input retrieval specification card file in the GENER step. In this test run, the input retrieval specification cards are used to produce a standard answer file in which all the status flags are A (add).

The next cataloged procedure executed by this run stream is ECRPM20. A substitutable parameter is used to specify ECMSTR5 as the input master file. The user must supply the DD information for the option card file in the LIST step. No option card is provided in this run stream, therefore the default option is in effect.

| Record Position | Field Length | Description |
|---|---|---|
| 1 - 8 | 8 | Card Type |
| 9 | 1 | Unused |
| 10 - 13 | 4 | Language Keyword |
| 14 | 1 | Unused |
| 15 | 1 | Description Selection Field |
| 16 | 1 | Unused |
| 17 | 1 | Category Selection Field |
| 18 | 1 | Unused |
| 19 | 1 | Comment Selection Field |
| 20 - 80 | 61 | Unused |

Figure AST7-1. EIS/AS Retrieval Control Card

Card Type: Identifies the type of control card.

Valid Codes: $$SELECT - Specifies the beginning of a retrieval request.
$$END - Specifies the end of a retrieval request and must appear alone on the card.
Field Length: 8 characters

Language Keyword: Identifies the type of retrieval language to be used.
Valid Codes: USER - Retrieval specifications will be COBOL language statements.
blank - Retrieval specifications will be EIS/AS retrieval language statements.
Field Length: 4 characters

Description Selection Field: Indicates whether or not description records are to be retrieved.
Valid Codes: 0 - Select description records.
blank - Do not select description records.
0 is the default value used when all three selection fields are blank.
Field Length: 1 character

Category Selection Field: Indicates whether or not category records are to be retrieved.
Valid Codes: 1 - Select category records.
blank - Do not select category records.
1 is the default value used when all three selection fields are blank.
Field Length: 1 character

(Page 1 of 2)

Figure AST7-2. Definition of EIS/AS Retrieval Control Card Fields

Comment Record Field: Indicates whether or not comment records are to be retrieved.

Valid Codes: 2 - Select comment records.

blank - Do not select comment records.

Blank is the default value used when all three selection fields are blank.

Field Length: 1 character

(Page 2 of 2)

Figure AST7-2 - continued. Definition of EIS/AS Retrieval Control Card Fields

## Valid Data Names for Retrieval - All Records

The following data names can be referenced in either EIS/AS retrieval language specifications or COBOL language specifications:

| Data Name | Field Length |
|---|---|
| AQCR | 3 |
| CATEGORY-DISAGGREG-NBR | 2 |
| CATEGORY-NUMBER | 3 |
| COUNTY | 4 |
| GEOG-SUBALLOCATION-NBR | 5 |
| LINE-NUMBER | 3 |
| RECORD-TYPE | 2 |
| RECORD-TYPE-KEY | 1 |
| STATE | 2 |

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Figure AST7-3. Valid Retrieval Data Names

## Valid Data Names for Retrieval - Description Record

The following data names from the description record can be referenced in either EIS/AS retrieval language specifications or COBOL language specifications:

| Data Name | Field Length | Data Name | Field Length |
|---|---|---|---|
| AIR-BASIN | 3 | SIP-ESTIMATE-CO | 5 |
| ASH-ANTHRACITE-COAL | 3 | SIP-ESTIMATE-HC | 5 |
| ASH-BITUMINOUS-COAL | 3 | SIP-ESTIMATE-NO$_x$ | 4 |
| ASSOC-PLANT-ID | 4 | SIP-ESTIMATE-SO$_2$ | 4 |
| DAY-CODE | 3 | SIP-ESTIMATE-TSP | 5 |
| DEFINED-AREA-CODE | 3 | SMSA | 4 |
| HEAVY-DUTY-DIESEL | 6 | SOURCE-TYPE | 1 |
| HEAVY-DUTY-VEHICLE | 6 | SUBALLOC-TECH-CODE | 2 |
| LENGTH-AREA | 7 | SUBURBAN | 6 |
| LENGTH-AREA-UNITS-CODE | 2 | SULFUR-ANTHRACITE-COAL | 2 |
| LIGHT-DUTY-VEHICLE | 6 | SULFUR-BITUMINOUS-COAL | 2 |
| LIMITED-ACCESS | 6 | SULFUR-DISTILLATE-OIL | 2 |
| MAJOR-ACTIVITY | 20 | SULFUR-RESIDUAL-OIL | 2 |
| POPULATION | 8 | URBAN | 7 |
| POPULATION-CODE | 1 | UTM-HORIZONTAL-1 | 4 |
| PROJECTED-YEAR | 2 | UTM-HORIZONTAL-2 | 4 |
| RURAL | 6 | UTM-HORIZONTAL-3 | 4 |
| RURAL-POPULATION-PERCENT | 2 | UTM-HORIZONTAL-4 | 4 |
| SIP-BASE-YEAR | 2 | UTM-HORIZONTAL-5 | 4 |
|  |  | UTM-HORIZONTAL-6 | 4 |

(Page 2 of 8)

Figure AST7-3 - continued. Valid Retrieval Data Names

Valid Data Names for Retrieval - Description Record (continued)

| Data Name | Field Length | Data Name | Field Length |
|---|---|---|---|
| UTM-VERTICAL-1 | 5 | UTM-ZONE-1 | 2 |
| UTM-VERTICAL-2 | 5 | UTM-ZONE-2 | 2 |
| UTM-VERTICAL-3 | 5 | UTM-ZONE-3 | 2 |
| UTM-VERTICAL-4 | 5 | UTM-ZONE-4 | 2 |
| UTM-VERTICAL-5 | 5 | UTM-ZONE-5 | 2 |
| UTM-VERTICAL-6 | 5 | UTM-ZONE-6 | 2 |
| | | YEAR | 2 |

The following names can only be referenced in COBOL language specifications:

AQCR-NAME
AREA-NAME
EIS-FLAG-CARD-0-1
EIS-FLAG-CARD-0-2
EIS-FLAG-CARD-0-3
EIS-FLAG-CARD-0-4
EIS-FLAG-CARD-0-5
EIS-FLAG-CARD-0-6
NEDS-A1-FLAG
NEDS-A3-FLAG
NEDS-A4-FLAG
SUBALLOC-TECH-DESC

(Page 3 of 8)

Figure AST7-3 - continued. Valid Retrieval Data Names

## Valid Data Names for Retrieval - Description Record Repeating Names

The following data names from the repeating section of the description record can be referenced in either EIS/AS retrieval language specifications or COBOL language specifications:

| Data Name | Field Length |
|---|---|
| AQMA-NUMBER | 6 |
| ATTAINMENT-STATUS | 1 |
| DESC-POLLUTANT-ID | 5 |

The following data names can only be referenced in COBOL language specifications:

DESC-POLLUTANT-NAME
EIS-FLAG-CARD-0-7

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Figure AST7-3 - continued. Valid Retrieval Data Names

## Valid Data Names for Retrieval - Category Record

The following data names from the category record can be referenced in either EIS/AS retrieval language specifications or COBOL language specifications:

| Data Name | Field Length | Data Name | Field Length |
|---|---|---|---|
| APRIL-THRUPUT | 2 | HOUR-11-THRUPUT | 2 |
| ASH-PERCENTAGE | 3 | HOUR-12-THRUPUT | 2 |
| AUGUST-THRUPUT | 2 | HOUR-13-THRUPUT | 2 |
| CATEGORY-ADJUST | 7 | HOUR-14-THRUPUT | 2 |
| DATA-CONFIDENCE-RATING | 1 | HOUR-15-THRUPUT | 2 |
| DAYS-PER-WEEK | 1 | HOUR-16-THRUPUT | 2 |
| DECEMBER-THRUPUT | 2 | HOUR-17-THRUPUT | 2 |
| FEBRUARY-THRUPUT | 2 | HOUR-18-THRUPUT | 2 |
| HEAT-CONTENT | 4 | HOUR-19-THRUPUT | 2 |
| HOUR-0-THRUPUT | 2 | HOUR-20-THRUPUT | 2 |
| HOUR-1-THRUPUT | 2 | HOUR-21-THRUPUT | 2 |
| HOUR-2-THRUPUT | 2 | HOUR-22-THRUPUT | 2 |
| HOUR-3-THRUPUT | 2 | HOUR-23-THRUPUT | 2 |
| HOUR-4-THRUPUT | 2 | HOURS-PER-DAY | 2 |
| HOUR-5-THRUPUT | 2 | INFORMATION-SOURCE-CODE | 1 |
| HOUR-6-THRUPUT | 2 | JANUARY-THRUPUT | 2 |
| HOUR-7-THRUPUT | 2 | JULY-THRUPUT | 2 |
| HOUR-8-THRUPUT | 2 | JUNE-THRUPUT | 2 |
| HOUR-9-THRUPUT | 2 | MARCH-THRUPUT | 2 |
| HOUR-10-THRUPUT | 2 | | |

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Figure AST7-3 - continued. Valid Retrieval Data Names

Valid Data Names for Retrieval - Category Record (continued)

| Data Name | Field Length | Data Name | Field Length |
|---|---|---|---|
| MAX-HRLY-THRUPUT | 10 | SULFUR-PERCENTAGE | 2 |
| MAY-THRUPUT | 2 | THRUPUT-RATIO | 4 |
| NITROGEN-PERCENTAGE | 3 | UNIFORM-HOURLY-THRUPUT | 1 |
| NOVEMBER-THRUPUT | 2 | UNIFORM-THRUPUT | 1 |
| OCTOBER-THRUPUT | 2 | UNITS-CODE | 2 |
| PROCESS-RATE | 9 | WEEKS-PER-YEAR | 2 |
| SEPTEMBER-THRUPUT | 2 | YEAR-OF-INFORMATION | 2 |

The following data names can only be referenced in COBOL language specifications:

CATEGORY-DESC
EIS-FLAG-CARD-1-1
EIS-FLAG-CARD-1-2
EIS-FLAG-CARD-1-3
EIS-FLAG-CARD-1-4
INFORMATION-SOURCE-NARRATIVE
NEDS-A7-COMMENT
NEDS-A7-FLAG
NEDS-FLAG
UNITS-CODE-DESCRIPTION

(Page 6 of 8)

Figure AST7-3 - continued. Valid Retrieval Data Names

Valid Data Names for Retrieval - Category Record Repeating Names

The following data names from the repeating section of the category record can be referenced in either EIS/AS retrieval language specifications or COBOL language specifications:

| Data Name | Field Length |
|---|---|
| CAT-POLLUTANT-ID | 5 |
| CONFIDENCE-RATING | 1 |
| EMF-CONFIDENCE-RATING | 1 |
| EMF-ORIGIN | 1 |
| EMF-SOURCE-CODE | 1 |
| EMISSIONS-ESTIMATE | 7 |
| EMISSION-FACTOR | 10 |
| MAXIMUM-HOURLY-EMISSION | 6 |
| NEDS-A7-EMISSION | 7 |
| POLLUTANT-SPECIFIC-DATA | 10 |

The following data names can only be referenced in COBOL language specifications:

CAT-POLLUTANT-NAME
EIS-FLAG-CARD-1-5

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Figure AST7-3 - continued. Valid Retrieval Data Names

## Valid Data Names for Retrieval - Comment Record

The following data names from the comment record can be referenced only in COBOL language specifications:

Data Name

EIS-FLAG-CARD-2-1
EIS-FLAG-CARD-2-2
LEFT-COMMENT
NEDS-A6-FLAG

Data Name

NEDS-COMMENT
RIGHT-COMMENT
TOTAL-COMMENT

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Figure AST7-3 - continued. Valid Retrieval Data Names

| Record Position | Field Length | Description |
|---|---|---|
| 1 - 31 | 31 | Subject Name |
| 32 | 1 | Unused |
| 33 | 1 | Negation Flag |
| 34 | 1 | Unused |
| 35 | 1 | Relational Operator |
| 36 | 1 | Unused |
| 37 - 67 | 31 | Object Name |
| 68 | 1 | Unused |
| 69 - 71 | 3 | Boolean Operator |
| 72 - 80 | 9 | Unused |

Figure AST7-4. EIS/AS Retrieval Language Specification Fields

Subject Name: Specifies the name of the field in the EIS/AS master file record to be compared with the literal or the master file field name specified by the object name.

Valid Codes: Only those fields listed in Figure AST7-3 can be used. The spelling, including hyphens, must match exactly.

Field Length: 31 characters

Negation Flag: Indicates whether the Boolean NOT condition is in effect.

Valid Codes: N - Boolean NOT is in effect.
blank - Boolean NOT is not in effect.

Field Length: 1 character

Relational Operator: Indicates the relationship to be tested between the subject name and the object name.

Valid Codes: = equal
< less than
> greater than

Field Length: 1 character

Object Name: A literal to be compared against the master file field specified by the subject name, or the name of a master file field to be compared against the master file field specified by the subject name (e.g., subject name = object name).

Valid Codes: If a literal is used, it must be enclosed in quotes. The length of the literal must be exactly the same as the field length of the data name being compared (see Figure AST7-3). If the name of a field from the master file is used, it must match exactly one of the names listed in Figure AST7-3. However, it must not be enclosed in quotes.

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Figure AST7-5. Definitions of EIS/AS Retrieval Language Specification Fields

Field Length: 31 characters

Boolean Operator: Identifies the type of connector used between the relationships specified on two succeeding control cards.

Valid Codes: AND - Indicates that both relationships must be true in order for the entire relationship to be true.

OR - Indicates that if either relationship is true, the entire relationship is true.

blank - Indicates that there is no connector, and therefore, that there is no further specification.

Field Length: 3 characters

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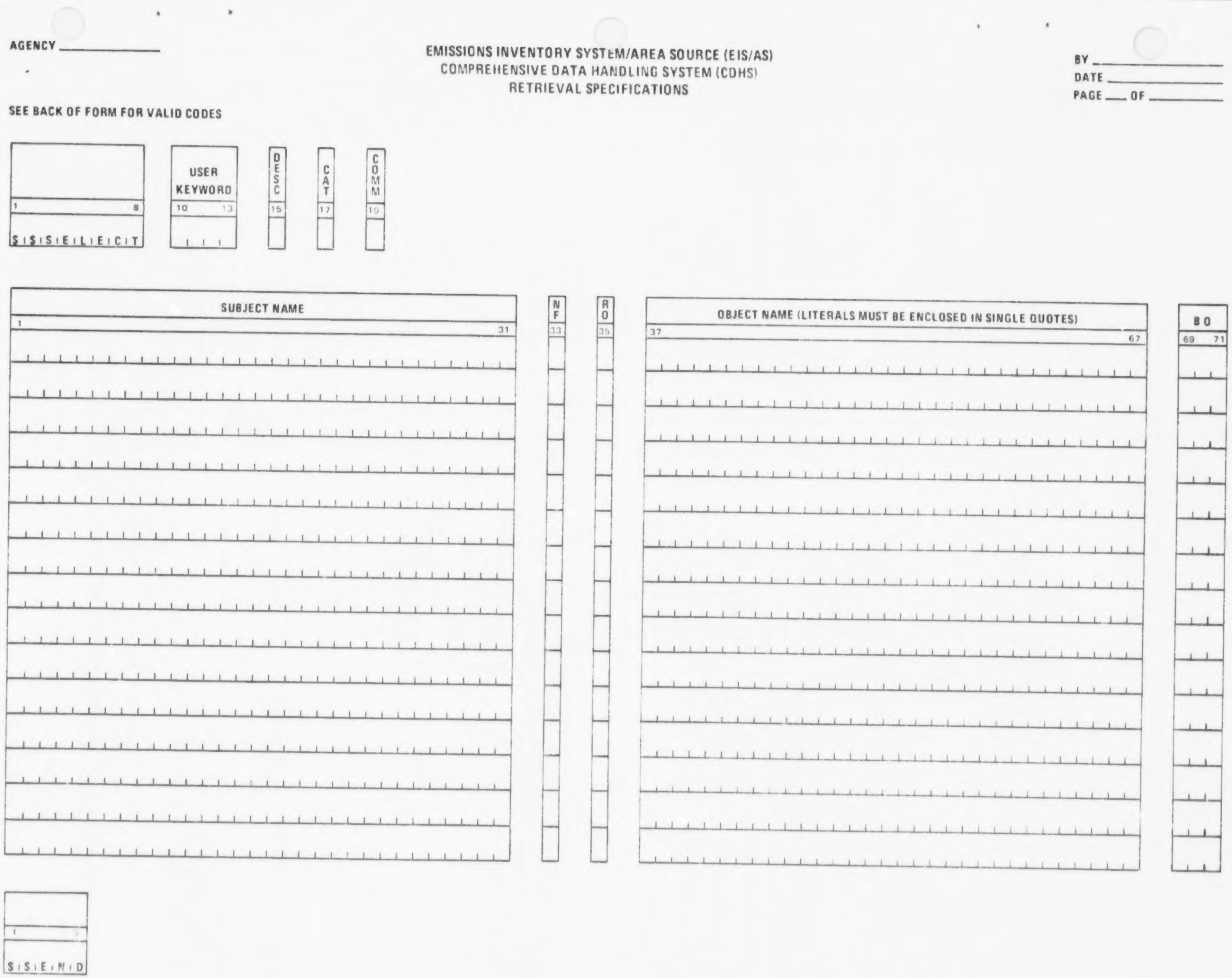
Figure AST7-5 - continued. Definitions of EIS/AS Retrieval Language Specification Fields



AGENCY ______

**EMISSIONS INVENTORY SYSTEM/AREA SOURCE (EIS/AS)**
**COMPREHENSIVE DATA HANDLING SYSTEM (CDHS)**
**RETRIEVAL SPECIFICATIONS**

BY ______
DATE ______
PAGE ___ OF ______

**SEE BACK OF FORM FOR VALID CODES**

| | USER KEYWORD | DESC | CAT | COMM |
|---|---|---|---|---|
| 1 8 | 10 13 | 15 | 17 19 | 19 |
| $$SELECT | | | | |

| SUBJECT NAME<br>1 31 | NF<br>33 | RO<br>35 | OBJECT NAME (LITERALS MUST BE ENCLOSED IN SINGLE QUOTES)<br>37 67 | BO<br>69 71 |
|---|---|---|---|---|
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|---|
| 1 5 |
| SSEND |

(Page 1 of 2)
Figure AST7-6. Retrieval Specification Load Sheets

# EMISSIONS INVENTORY SYSTEM / AREA SOURCE (EIS/AS)
# RETRIEVAL SPECIFICATIONS

PAGE 2

VALID VALUES FOR
NEGATION FLAG (NF):
BLANK, N
RELATIONAL OPERATOR (RO):
=EQUAL
>GREATER THAN
<LESS THAN
BOOLEAN OPERATOR (BO):
AND, OR, BLANK
TYPE: N = NUMERIC
A = ALPHANUMERIC

DATA NAMES VALID FOR ALL RECORDS

| NAME | LENGTH | TYPE |
|---|---|---|
| AQCR | 3 | N |
| CATEGORY-DISAGGREG-NBR | 2 | N |
| CATEGORY-NUMBER | 3 | N |
| COUNTY | 4 | N |
| GEOG-SUBALLOCATION-NBR | 5 | N |
| LINE-NUMBER | 3 | N |
| RECORD-TYPE | 2 | A |
| RECORD-TYPE-KEY | 1 | A |
| STATE | 2 | N |

CATEGORY REPEATING DATA NAMES

| NAME | LENGTH | TYPE |
|---|---|---|
| CAT-POLLUTANT-ID | 5 | N |
| CONFIDENCE-RATING | 1 | N |
| EMF-CONFIDENCE-RATING | 1 | N |
| EMF-ORIGIN | 1 | A |
| EMF-SOURCE-CODE | 1 | A |
| EMISSIONS-ESTIMATE | 7 | N |
| EMISSION-FACTOR | 10(3) | N |
| MAXIMUM-HOURLY-EMISSION | 6 | N |
| NEDS-A7-EMISSION | 7 | N |
| POLLUTANT-SPECIFIC DATA | 10 | A |

DESCRIPTION REPEATING DATA NAMES

| NAME | LENGTH | TYPE |
|---|---|---|
| AQMA-NUMBER | 6 | A |
| ATTAINMENT-STATUS | 1 | A |
| DESC-POLLUTANT-ID | 5 | N |

CATEGORY RECORD DATA NAMES

| NAME | LENGTH | TYPE |
|---|---|---|
| APRIL-THRUPUT | 2 | N |
| ASH-PERCENTAGE | 3(1) | N |
| AUGUST-THRUPUT | 2 | N |
| CATEGORY-ADJUST | 7 | N |
| DATA-CONFIDENCE-RATING | 1 | N |
| DAYS-PER-WEEK | 1 | N |
| DECEMBER-THRUPUT | 2 | N |
| FEBRUARY-THRUPUT | 2 | N |
| HEAT-CONTENT | 4 | N |
| HOUR-0-THRUPUT | 2 | N |
| HOUR-1-THRUPUT | 2 | N |
| HOUR-2-THRUPUT | 2 | N |
| HOUR-3-THRUPUT | 2 | N |
| HOUR-4-THRUPUT | 2 | N |
| HOUR-5-THRUPUT | 2 | N |
| HOUR-6-THRUPUT | 2 | N |
| HOUR-7-THRUPUT | 2 | N |
| HOUR-8-THRUPUT | 2 | N |
| HOUR-9-THRUPUT | 2 | N |
| HOUR-10-THRUPUT | 2 | N |
| HOUR-11-THRUPUT | 2 | N |
| HOUR-12-THRUPUT | 2 | N |
| HOUR-13-THRUPUT | 2 | N |
| HOUR-14-THRUPUT | 2 | N |
| HOUR-15-THRUPUT | 2 | N |
| HOUR-16-THRUPUT | 2 | N |
| HOUR-17-THRUPUT | 2 | N |
| HOUR-18-THRUPUT | 2 | N |
| HOUR-19-THRUPUT | 2 | N |
| HOUR-20-THRUPUT | 2 | N |
| HOUR-21-THRUPUT | 2 | N |
| HOUR-22-THRUPUT | 2 | N |
| HOUR-23-THRUPUT | 2 | N |
| HOURS-PER-DAY | 2 | N |
| INFORMATION-SOURCE-CODE | 1 | A |
| JANUARY-THRUPUT | 2 | N |
| JULY-THRUPUT | 2 | N |
| JUNE-THRUPUT | 2 | N |
| MARCH-THRUPUT | 2 | N |
| MAX-HRLY-THRUPUT | 10 | A |
| MAY-THRUPUT | 2 | N |
| NITROGEN-PERCENTAGE | 3(3) | N |
| NOVEMBER-THRUPUT | 2 | N |
| OCTOBER-THRUPUT | 2 | N |
| PROCESS-RATE | 9 | N |
| SEPTEMBER-THRUPUT | 2 | N |
| SULFUR-PERCENTAGE | 2(1) | N |
| THRUPUT-RATIO | 4(1) | N |
| UNIFORM-HOURLY-THRUPUT | 1 | A |
| UNIFORM-THRUPUT | 1 | A |
| UNITS-CODE | 2 | N |
| WEEK-PER-YEAR | 2 | N |
| YEAR-OF-INFORMATION | 2 | N |

DESCRIPTION RECORD DATA NAMES

| NAME | LENGTH | TYPE |
|---|---|---|
| AIR-BASIN | 3 | N |
| ASH-ANTHRACITE-COAL | 3(1) | N |
| ASH-BITUMINOUS-COAL | 3(1) | N |
| ASSOC-PLANT-ID | 4 | N |
| DAY-CODE | 3 | N |
| DEFINED-AREA-CODE | 3 | N |
| HEAVY-DUTY-DIESEL | 6 | N |
| HEAVY-DUTY-VEHICLE | 6 | N |
| LENGTH-AREA | 7(2) | N |
| LENGTH-AREA-UNITS-CODE | 2 | A |
| LIGHT-DUTY-VEHICLE | 7 | N |
| LIMITED-ACCESS | 6 | N |
| MAJOR-ACTIVITY | 20 | A |
| POPULATION | 8 | N |
| POPULATION-CODE | 1 | A |
| PROJECTED-YEAR | 2 | N |
| RURAL | 6 | N |
| RURAL-POPULATION-PERCENT | 2 | N |
| SIP-BASE-YEAR | 2 | N |
| SIP-ESTIMATE-CO | 5 | N |
| SIP-ESTIMATE-HC | 5 | N |
| SIP-ESTIMATE-NOX | 4 | N |
| SIP-ESTIMATE-SO2 | 4 | N |
| SIP-ESTIMATE-TSP | 5 | N |
| SMSA | 4 | A |
| SOURCE-TYPE | 1 | A |
| SUBALLOC-TECH-CODE | 2 | A |
| SUBURBAN | 6 | N |
| SULFUR-ANTHRACITE-COAL | 2(1) | N |
| SULFUR-BITUMINOUS-COAL | 2(1) | N |
| SULFUR-DISTILLATE-OIL | 2(1) | N |
| SULFUR-RESIDUAL-OIL | 2(1) | N |
| URBAN | 7 | N |
| UTM-HORIZONTAL-1 | 4(1) | N |
| UTM-HORIZONTAL-2 | 4(1) | N |
| UTM-HORIZONTAL-3 | 4(1) | N |
| UTM-HORIZONTAL-4 | 4(1) | N |
| UTM-HORIZONTAL-5 | 4(1) | N |
| UTM-HORIZONTAL-6 | 4(1) | N |
| UTM-VERTICAL-1 | 5(1) | N |
| UTM-VERTICAL-2 | 5(1) | N |
| UTM-VERTICAL-3 | 5(1) | N |
| UTM-VERTICAL-4 | 5(1) | N |
| UTM-VERTICAL-5 | 5(1) | N |
| UTM-VERTICAL-6 | 5(1) | N |
| UTM-ZONE-1 | 2 | N |
| UTM-ZONE-2 | 2 | N |
| UTM-ZONE-3 | 2 | N |
| UTM-ZONE-4 | 2 | N |
| UTM-ZONE-5 | 2 | N |
| UTM-ZONE-6 | 2 | N |
| YEAR | 2 | N |

NUMBERS IN PARENTHESES INDICATE ASSUMED DECIMAL POSITIONS

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Figure AST7-6 - continued. Retrieval Specification Load Sheets

```
//ASTES107 JOB    (ACCOUNTING INFO)
//*
//*   RETRIEVE A STANDARD ANSWER FILE FROM THE MASTER FILE
//*   AND PRODUCE A DETAILED REPORT OF THE ANSWER FILE
//*
//TEST107A EXEC ECHTM30,
//      DISP='NEW,CATLG,DELETE',
//      MSTRFIL=ECMSTRA,
//      ANSWFIL=ECMSTRS
//*
//*   RETRIEVE RECORDS FROM THE OUTPUT MASTER FILE IN TEST 63
//*   REPLACE WITH 'A' ALL DATA FLAGS THAT SHOW 'S',
//*   IN ORDER TO RESUBMIT THE MASTER FILE DATA TO NEDS
//*
//GENER.INPUT DD *
$$SELECT USER 0 1 2
           IF RECORD-IS-DESCRIPTION
             PERFORM USER-DESC-PARA THRU USER-DESC-PARA-END
           ELSE
             IF RECORD-IS-CATEGORY
               PERFORM USER-CAT-PARA THRU USER-CAT-PARA-END
             ELSE
               PERFORM USER-COMM-PARA THRU USER-COMM-PARA-END.
           PERFORM RECORD-QUAL-PARA THRU RECORD-QUAL-PARA-END.
           GO TO USER-QUALIFICATION-END.
         USER-DESC-PARA.
           IF NEDS-A1-FLAG EQUAL TO 'S'
             MOVE 'A' TO NEDS-A1-FLAG.
           IF NEDS-A3-FLAG EQUAL TO 'S'
             MOVE 'A' TO NEDS-A3-FLAG.
           IF NEDS-A4-FLAG EQUAL TO 'S'
             MOVE 'A' TO NEDS-A4-FLAG.
           IF EIS-FLAG-CARD-0-1 EQUAL TO 'S'
             MOVE 'A' TO EIS-FLAG-CARD-0-1.
           IF EIS-FLAG-CARD-0-2 EQUAL TO 'S'
             MOVE 'A' TO EIS-FLAG-CARD-0-2.
           IF EIS-FLAG-CARD-0-3 EQUAL TO 'S'
             MOVE 'A' TO EIS-FLAG-CARD-0-3.
           IF EIS-FLAG-CARD-0-4 EQUAL TO 'S'
             MOVE 'A' TO EIS-FLAG-CARD-0-4.
           IF EIS-FLAG-CARD-0-5 EQUAL TO 'S'
             MOVE 'A' TO EIS-FLAG-CARD-0-5.
           IF EIS-FLAG-CARD-0-6 EQUAL TO 'S'
             MOVE 'A' TO EIS-FLAG-CARD-0-6.
           MOVE BINARY-1 TO DESC-SUB.
           PERFORM USER-DESC-REPEAT-PARA
                   DESC-NBR-PULL TIMES.
         USER-DESC-PARA-END.
           EXIT.
         USER-DESC-REPEAT-PARA.
           IF EIS-FLAG-CARD-0-7 (DESC-SUB) EQUAL TO 'S'
             MOVE 'A' TO EIS-FLAG-CARD-0-7 (DESC-SUB).
           ADD BINARY-1 TO DESC-SUB.
         USER-DESC-REPEAT-PARA-END.
           EXIT.
         USER-CAT-PARA.
           IF NEDS-FLAG EQUAL TO 'S'
             MOVE 'A' TO NEDS-FLAG.
           IF NEDS-A7-FLAG EQUAL TO 'S'
             MOVE 'A' TO NEDS-A7-FLAG.
           IF EIS-FLAG-CARD-1-1 EQUAL TO 'S'
```

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Figure AST7-7. Run Stream

```
                MOVE 'A' TO EIS-FLAG-CARD-1-1.
              IF EIS-FLAG-CARD-1-2 EQUAL TO 'S'
                MOVE 'A' TO EIS-FLAG-CARD-1-2.
              IF EIS-FLAG-CARD-1-3 EQUAL TO 'S'
                MOVE 'A' TO EIS-FLAG-CARD-1-3.
              IF EIS-FLAG-CARD-1-4 EQUAL TO 'S'
                MOVE 'A' TO EIS-FLAG-CARD-1-4.
              MOVE BINARY-1 TO CAT-SUB.
              PERFORM USER-CAT-REPEAT-PARA
                   CAT-NBR-FULL TIMES.
            USER-CAT-PARA-END.
              EXIT.
            USER-CAT-REPEAT-PARA.
                IF EIS-FLAG-CARD-1-5 (CAT-SUB) EQUAL TO 'S'
                  MOVE 'A' TO EIS-FLAG-CARD-1-5 (CAT-SUB).
              ADD BINARY-1 TO CAT-SUB.
            USER-CAT-REPEAT-PARA-END.
              EXIT.
            USER-COMM-PARA.
              IF NEDS-A6-FLAG EQUAL TO 'S'
                MOVE 'A' TO NEDS-A6-FLAG.
              IF EIS-FLAG-CARD-2-1 EQUAL TO 'S'
                MOVE 'A' TO EIS-FLAG-CARD-2-1.
              IF EIS-FLAG-CARD-2-2 EQUAL TO 'S'
                MOVE 'A' TO EIS-FLAG-CARD-2-2.
            USER-COMM-PARA-END.
              EXIT.
$$END
//TES1010B EXEC ECMPM20,
//       MSTRFIL=ECMSTMS
//*
//*   GENERATE A DETAILED REPORT OF THE OUTPUT MASTER
//*   FILE FROM STEP A
//*
//LIST.OPTIONS DD *
```

(Page 2 of 2)

Figure AST7-7 - continued. Run Stream

```
                    EIS/AS RETRIEVAL LANGUAGE PROCESSOR PROGRAM - DIAGNOSTIC REPORT                          PAGE     1
PROGRAM NAME: CNTLNGP (ECOOVO)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980


INPUT (CONTROL CARDS):
$$SELECT USER 0 1 2
             IF RECORD-IS-DESCRIPTION
               PERFORM USER-DESC-PARA THRU USER-DESC-PARA-END
             ELSE
               IF RECORD-IS-CATEGORY
                 PERFORM USER-CAT-PARA THRU USER-CAT-PARA-END
               ELSE
                 PERFORM USER-COMM-PARA THRU USER-COMM-PARA-END.
             PERFORM RECORD-QUAL-PARA THRU RECORD-QUAL-PARA-END.
             GO TO USER-QUALIFICATION-END.
           USER-DESC-PARA.
             IF NEDS-A1-FLAG EQUAL TO 'S'
               MOVE 'A' TO NEDS-A1-FLAG.
             IF NEDS-A3-FLAG EQUAL TO 'S'
               MOVE 'A' TO NEDS-A3-FLAG.
             IF NEDS-A4-FLAG EQUAL TO 'S'
               MOVE 'A' TO NEDS-A4-FLAG.
             IF EIS-FLAG-CARD-0-1 EQUAL TO 'S'
               MOVE 'A' TO EIS-FLAG-CARD-0-1.
             IF EIS-FLAG-CARD-0-2 EQUAL TO 'S'
               MOVE 'A' TO EIS-FLAG-CARD-0-2.
             IF EIS-FLAG-CARD-0-3 EQUAL TO 'S'
               MOVE 'A' TO EIS-FLAG-CARD-0-3.
             IF EIS-FLAG-CARD-0-4 EQUAL TO 'S'
               MOVE 'A' TO EIS-FLAG-CARD-0-4.
             IF EIS-FLAG-CARD-0-5 EQUAL TO 'S'
               MOVE 'A' TO EIS-FLAG-CARD-0-5.
             IF EIS-FLAG-CARD-0-6 EQUAL TO 'S'
               MOVE 'A' TO EIS-FLAG-CARD-0-6.
             MOVE BINARY-1 TO DESC-SUB.
             PERFORM USER-DESC-REPEAT-PARA
                     DESC-NBR-POLL TIMES.
           USER-DESC-PARA-END.
             EXIT.
           USER-DESC-REPEAT-PARA.
             IF EIS-FLAG-CARD-0-7 (DESC-SUB) EQUAL TO 'S'
               MOVE 'A' TO EIS-FLAG-CARD-0-7 (DESC-SUB).
             ADD BINARY-1 TO DESC-SUB.
           USER-DESC-REPEAT-PARA-END.
             EXIT.
           USER-CAT-PARA.
             IF NEDS-FLAG EQUAL TO 'S'
```

(Page 1 of 5)

Figure AST7-8. Sample Output

```
                         EIS/AS RETRIEVAL LANGUAGE PROCESSOR PROGRAM - DIAGNOSTIC REPORT                    PAGE    2

         MOVE 'A' TO NEDS-FLAG.
       IF NEDS-A7-FLAG EQUAL TO 'S'
         MOVE 'A' TO NEDS-A7-FLAG.
       IF EIS-FLAG-CARD-1-1 EQUAL TO 'S'
         MOVE 'A' TO EIS-FLAG-CARD-1-1.
       IF EIS-FLAG-CARD-1-2 EQUAL TO 'S'
         MOVE 'A' TO EIS-FLAG-CARD-1-2.
       IF EIS-FLAG-CARD-1-3 EQUAL TO 'S'
         MOVE 'A' TO EIS-FLAG-CARD-1-3.
       IF EIS-FLAG-CARD-1-4 EQUAL TO 'S'
         MOVE 'A' TO EIS-FLAG-CARD-1-4.
       MOVE BINARY-1 TO CAT-SUB.
       PERFORM USER-CAT-REPEAT-PARA
            CAT-NBR-PULL TIMES.
     USER-CAT-PARA-END.
       EXIT.
     USER-CAT-REPEAT-PARA.
         IF EIS-FLAG-CARD-1-5 (CAT-SUB) EQUAL TO 'S'
           MOVE 'A' TO EIS-FLAG-CARD-1-5 (CAT-SUB).
       ADD BINARY-1 TO CAT-SUB.
     USER-CAT-REPEAT-PARA-END.
       EXIT.
     USER-COMM-PARA.
       IF NEDS-A6-FLAG EQUAL TO 'S'
         MOVE 'A' TO NEDS-A6-FLAG.
       IF EIS-FLAG-CARD-2-1 EQUAL TO 'S'
         MOVE 'A' TO EIS-FLAG-CARD-2-1.
       IF EIS-FLAG-CARD-2-2 EQUAL TO 'S'
         MOVE 'A' TO EIS-FLAG-CARD-2-2.
     USER-COMM-PARA-END.
       EXIT.
*$END

NUMBER OF CONTROL CARDS READ:                      74
NUMBER OF RETRIEVAL SKELETON RECORDS READ:        837
NUMBER OF RETRIEVAL SOURCE RECORDS WRITTEN:       963
NUMBER OF CONDITIONAL MESSAGES:                     0
NUMBER OF ABORT MESSAGES:                           0

PROGRAM NAME: CRTLNGP (ECU090)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980
```

(Page 2 of 5)

Figure AST7-8 - continued. Sample Output

```
                    EIS/AS GENERATED RETRIEVAL PROGRAM - DIAGNOSTIC REPORT                              PAGE     1
PROGRAM NAME: CRTGENR (EC0100)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980


NUMBER OF MASTER FILE RECORDS READ:        371
NUMBER OF MASTER FILE RECORDS WRITTEN:     371
NUMBER OF CONDITIONAL MESSAGES:              0
NUMBER OF ABORT MESSAGES:                    0

- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

                                AREA SOURCE MASTER FILE DETAIL LIST PROGRAM
                                             DIAGNOSTIC REPORT                                         PAGE     1
PROGRAM NAME: CRPMSTR (EC0130)
REVISION LEVEL:  1-00
LAST UPDATE #:  A-1
DATE INCORPORATED: FEBRUARY 1, 1980

OPTION IN EFFECT: NO VALID OPTION SPECIFIED, DEFAULT OF 60 LINES PER PAGE ASSUMED

NUMBER OF RECORDS READ:                    371
NUMBER OF DESCRIPTION RECORDS:              18
NUMBER OF CATEGORY RECORDS:                334
NUMBER OF COMMENT RECORDS:                  19
```

(Page 3 of 5)

Figure AST7-8 - continued. Sample Output

```
                                   AREA SOURCE MASTER FILE DETAIL LIST PROGRAM
                                                  FILE LISTING                                                        PAGE   139

***************
**DESCRIPTION**   STATE   COUNTY   AQCR   AQCR NAME
***************   -----------------------------------------------------------------------  PLANT ID   GEOG SUB #   SMSA   BATCH
                    31     0015     011   WESTERN PART OF STATE OO                         ----------------------------------------
                                                                                             0195       00367      1257     0
  RECORD     CATEGORY    CATEGORY     AIR     DEFINED     AREA                     MAJOR                 SUBALLOCATION TECHNIQUE
   TYPE       NUMBER     DISAG #     BASIN   AREA CODE    NAME                    ACTIVITY                 CODE   DESCRIPTION
  -----------------------------------------------------------------------------------------------------------------------------
   SG          000         00         011       123       CADE'S COVE              FARMING                 15     CAASE

  DATE      SIP BASE     PROJ'D     SOURCE              LENGTH          POP        POPULATION           NUMBER UTM      NUMBER OF
  YR/DAY      YEAR        YEAR       TYPE          AREA     UNITS CD    CODE   NON %         TOTAL     COORDINATES     POLLUTANTS
  -----------------------------------------------------------------------------------------------------------------------------
  79/303       79          83          A          137.59       12                50        101,234          2               16

                                                          UTM  COORDINATES
  01  HORIZ      VERT     02  HORIZ      VERT     03  HORIZ      VERT     04  HORIZ      VERT     05  HORIZ      VERT     06  HORIZ      VERT
  ----------------     -----------------     -----------------     -----------------     -----------------     -----------------
  18  550.0  4310.0    18  535.1  4320.1

        SULFUR  CONTENTS            ASH  CONTENTS              GAS FUEL             DIESEL FUEL                MOTOR  VEHICLE  MILES
 ANTH    BITUM    DIST   RESID'L    ANTH     BITUM              VEHICLES             VEHICLES    LIMITED ACCESS   RURAL    SUB  URBAN      URBAN
 COAL     COAL     OIL     OIL      COAL      COAL           LIGHT      HEAVY          HEAVY          ROADS         ROADS       ROADS        ROADS
 ------------------------------   ---------------     ---------------------     -----------   ---------------------------------------------------


   FLAG    EIS   FLAGS                                   SIP ESTIMATES
 NEDS AI  1 2 3 4 5 6          TSP          SO2            NOX           HC              CO
 -------  -----------    --------------------------------------------------------------------
    A     A A A A A A          125          137             12         3,459            119

     ***      POLLUTANT                   ATTAINMENT     AQMA     EIS    ***      POLLUTANT                    ATTAINMENT    AQMA     EIS     ***
     ***    ID        NAME                  STATUS      NUMBER    F 7    ***    ID        NAME                   STATUS     NUMBER    F 7     ***
     ---------------------------------------------------------------------------------------------------------------------------------------
     ***   11101     TSP                      U          000123    A     ***   11105     BENZENE ORGNICS           A         000123    A      ***
     ***   44101     TOTAL OXIDANTS           U          000123    A     ***   44201     OZONE                     A         000123    A      ***
     ***   42101     CO                       U          000123    A     ***   42102     CO2                       A         000123    A      ***
     ***   43102     NONMETH HC               U          000123    A     ***   43502     FORMALDEHYDE              A         000123    A      ***
     ***   12306     NITRATES                 U          000123    A     ***   12403     SULFATES                  A         000123    A      ***
     ***   42603     NOX                      U          000123    A     ***   43101     HC                        A         000123    A      ***
     ***   42601     NO                       U          000123    A     ***   42602     NO2                       A         000123    A      ***
     ***   42401     SO2                      U          000123    A     ***   42402     HYDROGEN SULFIDE          A         000123    A      ***
***********
**COMMENT**        STATE     COUNTY     AQCR       GEOG          CATEGORY     CATEGORY     COMMENT                  FLAGS              BATCH
**RECORD **                                     SUBALLOC #       NUMBER      DISAG #       TYPE       NEDS AO     EIS 1    EIS 2      CODE
***********        ---------------------------------------------------------------------------------------------------------------------
                    31       0015       011       00367           000          00          EIS           A          A        A          0
                   LINE #     COMMENTS
                   -----------------------------------------------------------------------------------------------------------------------
                    001       AREA IS BOUNDED BY ROUTES 17,35,49, AND 1001A
                    002       THREE FACTORIES, ONE AIRSTRIP, ONE QUARRY AND    15 FARMS INCLUDED. REST IS URBAN.
```

(Page 4 of 5)

Figure AST7-8 - continued. Sample Output

```
                                        AREA SOURCE MASTER FILE DETAIL LIST PROGRAM
                                                       FILE LISTING
                                                                                                                   PAGE   140
****************
**CATEGORY 234**                STATE     COUNTY     AQCR     GEOG SUBALLOC #     CATEGORY #     CATEGORY DISAG #     BATCH
****************                ---------------------------------------------------------------------------------------
                                  51       0015       011         00367              234               01               0
RECORD    RECORD     CATEGORY                                CATEGORY       PROCESS          UNITS            NORMAL OPERATING     THRUPUT
 YEAR      TYPE     DESCRIPTION                             ADJUSTMENT        RATE       CODE   DESCRIPTION    HR/D D/WK  WK/YR     RATIO
-------------------------------------------------------------------------------------------------------------------------------------------
 1979      SD       CAT 100 DISAG 10                            10            1597
                                                                                                                24    7     52        1.3
   UNIFORM                            MONTHLY THRUPUT PERCENTAGES                                           PERCENTAGES OF              HEAT
   THRUPUT    JAN    FEB    MAR    APR    MAY    JUN    JUL    AUG    SEP    OCT    NOV    DEC       NITROGEN    SULFUR     ASH     CONTENT
   -------------------------------------------------------------------------------------------       -------------------------------------
     YES        8      8      9      8      8      9      8      8      9      8      8      9          .036        7.1      10.2     0034
  UNIFORM                                                                  HOURLY THRUPUT PERCENTAGES
  THRUPUT  0000 0100 0200 0300 0400 0500 0600 0700 0800 0900 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300
  -------------------------------------------------------------------------------------------------------------------------------
    YES      4    4    4    4    4    5    4    4    4    4    4    5    4    4    4    4    4    5    4    4    4    4    4    5
 MAX HRLY   DATA CONF        EIS FLAG     NEDS    NEDS A7                                  INFORMATION SOURCE                  NUMBER OF
  THRUPUT     RATING        1  2  3  4    FLAG   FLAG  COMMENT                             CODE      NARRATIVE                 POLLUTANTS
----------  ----------    ------------------- -----------------------------------------   ---------------------------------   ----------
                1            A  A  A  A     A       A
                                                                                             L         LOCAL GOVRNMT               16
  POLLUTANT                          POLLUTANT        EMISSION        EM FAC      EM FAC   EM FAC    EMISSIONS     NEDS A7   MAX HOURLY      CONF    FLAG
  ID    NAME                       SPECIFIC DATA       FACTOR        CONF RING    SOURCE   ORIGIN    ESTIMATES     EMISSION  MAX HOURLY      RING    EIS 5
----------------------------       -------------      --------       ---------    ------   ------    ---------     --------  ----------    ----------------
11101  TSP                                           1,241.398           5           A        L        101,108                                3       A
11103  BENZENE ORGNICS                               1,201.449           5           A        L          9,594                                3       A
11114  RINGELN PART                                  1,241.198           5           A        L          9,911                                3       A
21101  TOTAL DUSTFALLS              XXJ-12             351.111           5           A        L          2,804                                3       A
22306  NITRATES                                      1,241.198           5           A        L          9,911                                3       A
22403  ISULFATES                                     2,316.449           5           A        L         18,497                                3       A
42101  CO                                            1,243.398           5           A        L          9,929                                3       A
42102  CO2                                           2,317.749           5           A        L         18,507                                3       A
42401  SO2                                           1,201.398           5           A        L         68,111                                3       A
42402  HYDROGEN SULFDE                               2,000.749           5           A        L         15,976                                3       A
42601  NO                           J/112-A          1,201.998           5           A        L          9,598                                3       A
42602  NO2                          S-JJJJ-55        4,300.749           5           A        L          1,236                                3       A
42603  NOX                          J/118AA          1,201.738           5           A        L          9,546                                3       A
43101  HC                           XXJ-12           1,351.001           5           A        L         10,788     0000100                    3       A
43102  NONMETH HC                                    1,201.448           5           A        L          9,594                                3       A
43502  FORMALYHYDE                  S-JJJ5555        4,200.749           5           A        L         33,543                                3       A
                                                                                                                                              3       A
************
**COMMENT**          STATE     COUNTY     AQCR        GEOG          CATEGORY      CATEGORY      COMMENT                    FLAGS               BATCH
**RECORD **                                       SUBALLOC #         NUMBER       DISAG  #        TYPE       NEDS A6     EIS 1     EIS 2       CODE
************         --------------------------------------------------------------------------------------------------------------------------------
                       51       0015       011       00367             234           01            EIS          A           A         A           0
                     LINE #     COMMENTS
                     --------------------------------------------------------------------------------------------------------------------------------
                      001       CATEGORY IS BROKEN INTO THREE SUBALLOCATIONS      10, 20, 30, FURTHER SUBDIVISION LATER
```

(Page 5 of 5)

Figure AST7-8 - continued. Sample Output

## EIS/AS Test 8

### Submit Annual Report in EIS/AS Format

In this test run, EIS/AS master file internal transactions are generated from the EIS/AS master file in order to submit the data that has been added, changed, or deleted since the last execution of CRPASNA (EC0120) to the appropriate agency. The cataloged procedure ECRPM10 is used to execute CRPASNA (EC0120), the annual report program.

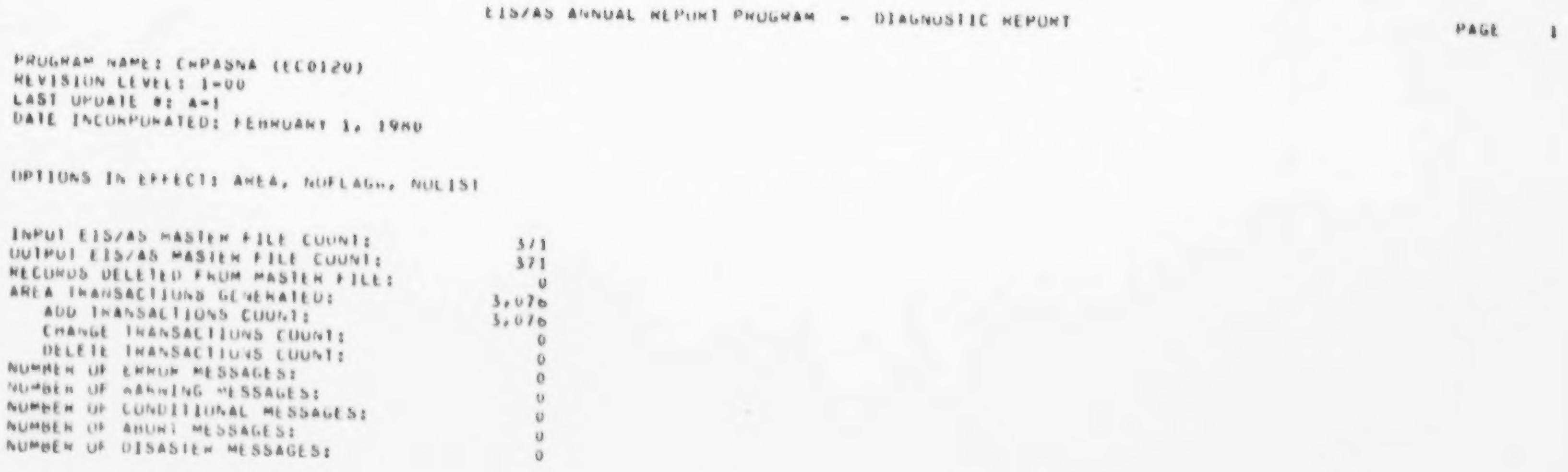
In Test 6, CRPASNA (EC0120) was used to submit an annual report to NEDS by generating NEDS transactions. In this test EIS/AS internal transactions are generated by the annual report program. This is accomplished by specifying AREA on the option card. For a description of CRPASNA (EC0120) refer to Test 6.

The run stream for this test run contains the JCL needed for submitting EIS/AS master file data to the appropriate agency by generating EIS/AS internal transactions. This run stream is shown in Figure AST8-1.

The cataloged procedure executed by this run stream is ECRPM10. By using substitutable parameters, the input master file is specified as ECMSTR5 (created in Test 7), the output master file is named ECMSTR6, and the output EIS/AS internal transaction file is named ECAREA1. The user must supply the DD (data definition) information for the option card file in the REPORT step. The options specified in this test run are AREA, NOFLAGW, and NOLIST. Note that when EIS/AS internal transactions are being generated the NEDS transaction file ECSNDTR must be a dummy file in the REPORT step. The sample output produced by this run stream is shown in Figure PST8-2.

```
//ASTEST08 JOB    (ACCOUNTING INFO)
//*
//*    SUBMIT ANNUAL REPORT TO NEDS USING EIS/AS
//*    INTERNAL TRANSACTIONS
//*
//TEST08A EXEC ECRPM10,
//       OLDMSTR=ECMSTR5,
//       NEWMSTR=ECMSTR6,
//       TRANFL2=ECANFA1
//*
//*    GENERATE EIS/AS INTERNAL TRANSACTIONS FOR ANNUAL REPORT
//*
//REPORT.ECSNDTR DD DUMMY
//REPORT.OPTIONS DD *
AREA NOFLAG, NOLIST
```

Figure AST8-1. Run Stream



```
                                   EIS/AS ANNUAL REPORT PROGRAM  -  DIAGNOSTIC REPORT                                     PAGE   1

PROGRAM NAME: CRPASNA (EC0120)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980

OPTIONS IN EFFECT: AREA, NOFLAGR, NOLIST

INPUT EIS/AS MASTER FILE COUNT:                 371
OUTPUT EIS/AS MASTER FILE COUNT:                371
RECORDS DELETED FROM MASTER FILE:                 0
AREA TRANSACTIONS GENERATED:                  3,076
   ADD TRANSACTIONS COUNT:                    3,076
   CHANGE TRANSACTIONS COUNT:                     0
   DELETE TRANSACTIONS COUNT:                     0
NUMBER OF ERROR MESSAGES:                         0
NUMBER OF WARNING MESSAGES:                       0
NUMBER OF CONDITIONAL MESSAGES:                   0
NUMBER OF ABORT MESSAGES:                         0
NUMBER OF DISASTER MESSAGES:                      0
```

Figure AST8-2.  Sample Output

## EIS/AS Test 9

## Generate Internal Transactions and Update the Master File

In this test run, the EIS/AS master file is used to generate internal transactions; each transaction will contain the emission factor file information that corresponds to it. These transactions are then used to update the master file. The cataloged procedure that achieves this is ECFMM30 which executes CMSEFGN (EC0080), the master file emission factor transaction generator program; CSRINTR (EC0050), the master file internal transaction sort program; and CFMMSTR (EC0070), the master file maintenance program.

CMSEFGN (EC0080) compares the EIS/AS master file to the EIS/AS emission factor file and creates internal transactions to update the emission factor information in the master file with data from the emission factor file.

If a matching emission factor file record is found for a master file category record, the dates of the emission factor file record are compared to the date specified on the option card. If the date of the emission factor file category record is greater than that specified by the user for category records, a category-2 internal transaction is generated to change the nitrogen, sulfur, and ash contents in the master file record. The emission factor file pollutant records for each pollutant ID in the master file record are then examined. If the date in the pollutant record is greater than that specified by the user for pollutant records, a category-5 internal transaction is generated to change the emission factor, confidence level, and specific data for the pollutant ID. Only category-2 and category-5 change transactions are generated. Note that these transactions are in master file internal transaction format.

An option card is used to specify date criteria for the emission factor file and to specify whether or not warning messages should be printed.

The date criteria specify a category date and a pollutant date. A category date must be specified for any category-2 internal transactions to be generated; likewise, a pollutant date must be specified for any category-5 internal transactions to be generated. Also, the date of an emission factor file category record must be greater than the specified category date for a category-2 transaction to be created, and the date of an emission factor file pollutant record must be greater than the specified pollutant date for a category-5 transaction to be created. A category date is specified by coding CDAT YYDDD in card columns 13 through 22, where YYDDD represents a five-digit Julian date. Also, a pollutant date is specified by coding PDAT YYDDD in card columns 28 through 37, where YYDDD represents a five-digit Julian date. Either type, or both types can be specified; however, at least one type must be specified. If no date is specified, or if a date is specified incorrectly, program execution will be terminated.

If FLAGW is coded in card columns 1 through 5, all warning messages will be printed in the diagnostic report; if NOFLAGW is coded in columns 1 through 7, no warning messages will be printed. If this field is left blank or improperly coded, a default of NOFLAGW is assumed.

The programs CSRINTR (EC0050) and CFMMSTR (EC0070) have been described in Test 2.

The run stream for this test run contains the JCL needed for generating from the master file internal transactions with new emission factor information and then using these transactions to update the master file. This run stream is shown in Figure AST9-1.

The cataloged procedure executed by this run stream is ECFMM30. Substitutable parameters are used to specify ECMSTR6 (created in Test 8) as the input master file, ECEMFL1 (created in Test 1) as the input emission factor file, and ECMSTR7 as the updated master file. The user must supply the DD (data definition) information for the option card files in the GENER and UPDATE steps. The options used in the GENER step of this test are FLAGW, CDAT 75001, and PDAT 75001. In the UDPATE step the options used are 80, FLAGW, and LIST. Refer to Figure AST9-2 for the sample output produced by this run stream.

```
//ASTEST09 JOB    (ACCOUNTING INFO)
//*
//*   GENERATE INTERNAL EMISSION FACTOR TRANSACTIONS AND
//*   UDPATE THE MASTER FILE
//*
//TEST09A EXEC ECFMM30,
//       EMFCFIL=ECFMFL1,
//       OLDMSTR=ECMSTR6,
//       NEWMSTR=ECMSTR7
//*
//*   CREATE INTERNAL TRANSACTIONS FROM THE TEST 8
//*   MASTER FILE;  INSERT NEW EMISSION FACTOR FILE
//*   INFORMATION INTO THE TRANSACTIONS;  UPDATE
//*   THE MASTER FILE WITH THESE TRANSACTIONS
//*
//GENER.OPTIONS DD *
FLAGW       CDAT 75001     PDAT 75001
//UPDATE.OPTIONS DD *
80 FLAGW LIST
```

Figure AST9-1.  Run Stream

```
                                    MASTER FILE EMISSION FACTOR TRANSACTION GENERATOR PROGRAM                                   PAGE    1

PROGRAM NAME: CMSEFGN (EC0080)
REVISION LEVEL:  1-00
LAST UPDATE #:  A-1
DATE INCORPORATED:  FEBRUARY 1, 1980


OPTIONS IN EFFECT:  FLAGW        CDAT 75001      PDAT 75001


                                                  DATE: CATEGORY 75/001  POLLUTANT 75/001


          *** CMSEFGN 009 CONDITIONAL - EMISSION FACTOR FILE CONTAINS FEDERAL CATEGORY RECORDS FOR CATEGORIES OTHER THAN 1-69

RECORD KEY:  061280   000000001001000
          *** CMSEFGN 019 WARNING - NO NITROGEN, SULFUR, OR ASH CONTENTS FOR THIS KEY

RECORD KEY:  061280   000000001001000       POLLUTANT ID:  11101
          *** CMSEFGN 015 WARNING - NO MATCHING EMISSION FACTOR RECORD FOR THIS POLLUTANT ID

RECORD KEY:  061280   000000001001000       POLLUTANT ID:  42101
          *** CMSEFGN 015 WARNING - NO MATCHING EMISSION FACTOR RECORD FOR THIS POLLUTANT ID

RECORD KEY:  061280   000000001001000       POLLUTANT ID:  42401
          *** CMSEFGN 015 WARNING - NO MATCHING EMISSION FACTOR RECORD FOR THIS POLLUTANT ID

RECORD KEY:  061280   000000001001000       POLLUTANT ID:  42602
          *** CMSEFGN 015 WARNING - NO MATCHING EMISSION FACTOR RECORD FOR THIS POLLUTANT ID

RECORD KEY:  061280   000000001001000       POLLUTANT ID:  43101
          *** CMSEFGN 015 WARNING - NO MATCHING EMISSION FACTOR RECORD FOR THIS POLLUTANT ID
```

(Page 1 of 6)

Figure AST9-2. Sample Output

```
                         MASTER FILE EMISSION FACTOR TRANSACTION GENERATOR PROGRAM                         PAGE 10

                                  DATE: CATEGORY 75/001  POLLUTANT 75/001

NUMBER OF MASTER FILE RECORDS READ:                  371
NUMBER OF EMISSION FACTOR RECORDS READ:              462
NUMBER OF CATEGORY-2 TRANSACTIONS CREATED:             0
NUMBER OF CATEGORY-5 TRANSACTIONS CREATED:         1,136

NUMBER OF WARNING MESSAGES:                        1,034
NUMBER OF CONDITIONAL MESSAGES:                        1
NUMBER OF ERROR MESSAGES:                              0
NUMBER OF ABORT MESSAGES:                              0
NUMBER OF DISASTER MESSAGES:                           0
```

(Page 2 of 6)

Figure AST9-2 - continued. Sample Output

```
                ETS/AS MASTER FILE INTERNAL TRANSACTION SORT PROGRAM  -  DIAGNOSTIC REPORT                       PAGE    1

PROGRAM NAME: ESPINTP (ECU050)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980


NUMBER OF INPUT TRANSACTIONS READ:                                1,136
NUMBER OF TRANSACTIONS WRITTEN:                                   1,137



- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -



                ETS/AS MASTER FILE MAINTENANCE PROGRAM  -  DIAGNOSTIC MESSAGES                       PAGE    1
PROGRAM NAME: EPMMSTP (ECU070)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980

OPTION CARD

   CONTROL DATE IS 80   , ERROR OPTION IS FLAGW  , LIST OPTION IS LIST



- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


                ETS/AS MASTER FILE MAINTENANCE PROGRAM  -  DIAGNOSTIC MESSAGES                       PAGE    2
   NUMBER OF INPUT TRANSACTIONS READ:                             1,137
   NUMBER OF DISASTERS DETECTED:                                      0
   NUMBER OF ABORTS DETECTED:                                         0
   NUMBER OF ERRORS DETECTED:                                         0
   NUMBER OF CONDITIONALS DETECTED:                                   0
   NUMBER OF WARNINGS DETECTED:                                       0
   NUMBER OF TRANSACTIONS REJECTED:                                   0
   NUMBER OF AREA SOURCE FILE RECORDS READ IN:                      371
   NUMBER OF AREA SOURCE FILE RECORDS WRITTEN OUT:                  371
```

(Page 3 of 6)

Figure AST9-2 - continued. Sample Output

```
                          FIS/AS MASTER FILE MAINTENANCE PROGRAM  -  INTERNAL TRANSACTION LISTING                            PAGE    1
00000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000
062238   000000023001000052CA   1110100000000000F   000000000000000000000000000000000000000000000000000000000000
062238   000000023001000052CA   4210100000000000F                                       SUSPENDED PART.
062238   000000023001000052CA   4240100000250000F                                       SUSPENDED PART.
062238   000000023001000052CA   4260200000030000F                                       SULFUR DIOXIDE
062238   000000047001000052CA   1110100000020000F                                         N  OXIDES
062238   000000047001000052CA   4210100000020000F                                       SUSPENDED PART.
062238   000000047001000052CA   4240100000010000F                                       SUSPENDED PART.
062238   000000047001000052CA   4260200000020000F                                       SULFUR DIOXIDE
062238   000000060001000052CA   1110100000170000F                                         N  OXIDES
062238   000000060001000052CA   4210100000170000F                                       SUSPENDED PART.
062238   000000060001000052CA   4240100000150000F                                       SUSPENDED PART.
062238   000000060001000052CA   4260200000040000F                                       SULFUR DIOXIDE
147840   000000001001000052CA   1110100000100000F                                         N  OXIDES
147840   000000001001000052CA   4210100000100000F                                       SUSPENDED PART.
147840   000000001001000052CA   4240100000380000F                                       SUSPENDED PART.
147840   000000001001000052CA   4260200000030000F                                       SULFER DIOXIDES
147840   000000002001000052CA   1110100000200000F                                         N  OXIDES
147840   000000002001000052CA   4210100000200000F                                       SUSPENDED PART.
147840   000000002001000052CA   4240100000380000F                                       SUSPENDED PART.
147840   000000002001000052CA   4260200000030000F                                       SULFER DIOXIDE
147840   000000003001000052CA   1110100000250000F                                         N  OXIDES
147840   000000003001000052CA   4210100000250000F                                       SUSPENDED PART.
147840   000000003001000052CA   4240100001440000F                                       SUSPENDED PART.
147840   000000003001000052CA   4260200000180000F                                       SULFUR DIOXIDE
147840   000000005001000052CA   1110100000100000F                                         N  OXIDES
147840   000000005001000052CA   4210100000100000F                                       SUSPENDED PART.
147840   000000005001000052CA   4240100000060000F                                       SUSPENDED PART.
147840   000000005001000052CA   4260200000080000F                                       SULFUR DIOXIDE
147840   000000008001000052CA   1110100000580000F                                         N  OXIDES
147840   000000008001000052CA   4210100000580000F                                       SUSPENDED PART.
147840   000000008001000052CA   4240100000380000F                                       SUSPENDED PART.
147840   000000008001000052CA   4260200000091500F                                        SULFUR DIOXIDE
147840   000000009001000052CA   1110100000200000F                                         N  OXIDES
147840   000000009001000052CA   4210100000200000F                                       SUSPENDED PART.
147840   000000009001000052CA   4240100001440000F                                       SUSPENDED PART.
147840   000000009001000052CA   4260200000220000F                                       SULFUR DIOXIDE
147840   000000010001000052CA   1110100001690000F                                         N  OXIDES
147840   000000010001000052CA   4210100001690000F                                       SUSPENDED PART.
147840   000000010001000052CA   4240100001590000F                                       SUSPENDED PART.
147840   000000010001000052CA   4260200000600000F                                       SULFUR DIOXIDE
147840   000000011001000052CA   1110100000100000F                                         N  OXIDES
147840   000000011001000052CA   4210100000100000F                                       SUSPENDED PART.
147840   000000011001000052CA   4240100000060000F                                       SUSPENDED PART.
147840   000000011001000052CA   4260200000120000F                                       SULFUR DIOXIDE
147840   000000014001000052CA   1110100000520000F                                         N  OXIDES
147840   000000014001000052CA   4210100000520000F                                       SUSPENDED PART.
                                                                                        SUSPENDED PART.
```

(Page 4 of 6)

Figure AST9-2 - continued. Sample Output

```
                      EIS/AS MASTER FILE MAINTENANCE PROGRAM  -  OLD MASTER FILE LISTING                         PAGE     1
061280   0000000000000000565067CG
061280   0000000010010000734067CARESIDENT ANTHRACITE COAL 79000040123                     Y080809080809080809080809
061280   0000000020010000669067CARESIDENT BITUMINOUS COAL 79000020010                     Y080809080809080809080809
061280   0000000030010000734067CARESIDENT DISTILLATE OIL  79000009750                     Y080809080809080809080809
061280   0000000040010000669067CARESIDENTIAL RESIDUAL OIL 79000008900                     Y080809080809080809080809
061280   0000000050010000669067CARESIDENTIAL NATURAL GAS  79000023550                     Y080809080809080809080809
061280   0000000060010000734067CARESIDENTIAL WOOD         79000000050                     Y080809080809080809080809
061280   0000000070010000669067CACOMM-INST ANTHRACITE COAL79000023500                     Y080809080809080809080809
061280   0000000080010000669067CACOMM-INST BITUMINOUS COAL79000034750                     Y080809080809080809080809
061280   0000000090010000734067CACOMM-INST DISTILLATE OIL 79000042100                     Y080809080809080809080809
061280   0000000100010000669067CACOMM-INST RESIDUAL OIL   79000000390                     Y080809080809080809080809
061280   0000000110010000669067CACOMM-INST NATURAL GAS    79000008750                     Y080809080809080809080809
061280   0000000120010000734067CACOMM-INST WOOD           79000000005                     Y080809080809080809080809
061280   0000000130010000669067CAINDUSTRY ANTHRACITE COAL 79000098750                     Y080809080809080809080809
061280   0000000140010000669067CAINDUSTRY BITUMINOUS COAL 79000123400                     Y080809080809080809080809
061280   0000000150010000734067CAINDUSTRIAL COKE          79000009850                     Y080809080809080809080809
061280   0000000160010000669067CAINDUSTRIAL DISTILLATE OIL79000021500                     Y080809080809080809080809
061280   0000000170010000669067CAINDUSTRIAL RESIDUAL OIL  79000000980                     Y080809080809080809080809
061280   0000000180010000734067CAINDUSTRIAL NATURAL GAS   79000056900                     Y080809080809080809080809
061280   0000000190010000669067CAINDUSTRIAL WOOD          79000000025                     Y080809080809080809080809
061280   0000000200010000669067CAINDUSTRIAL PROCESS GAS   79000002350                     Y080809080809080809080809
061280   0000009990010000799   CA
061280   0000010000000000453067SG79
061280   0000010010010000474067SARESIDENT ANTHRACITE COAL 79000059850                     Y080809080809080809080809
061280   0000010010110000474067SDRESIDENT ANTHRACITE COAL 79000059850                     Y080809080809080809080809
061280   0000010013510000344067SDRESIDENT ANTHRACITE COAL 79000059850                     Y080809080809080809080809
061280   0000010019910000344067SDRESIDENT ANTHRACITE COAL 79000059850                     Y080809080809080809080809
061280   0000019990010000474   CA
061280   0005000000000000453067SG
061280   0005000010110000344067SDRESIDENT ANTHRACITE COAL 79000059850
061280   0005000012210000344067SDRESIDENT ANTHRACITE COAL 79000059850                     Y080809080809080809080809
061280   0005000017010000344067SDRESIDENT ANTHRACITE COAL 79000059850
061280   0005009990010000344   CA
061280   0006110000000000453067SG79
061280   0006119990010000344   CA .
061280   0999900000000000453067SG79
061280   0999900019910000344067SDRESIDENT ANTHRACITE COAL 79000059850                     Y080809080809080809080809
061280   0999999990010000344   CA
062238   0000000000000000453067CG79
062238   0000000000020000136067 NAREA SOURCE TEST - SOME, BUT NOT ALL VALUES OR CATEGORIES
062238   0000000230010000669067CACOMM-INST ON-SITE INCINER79000002350                     Y080809080809080809080809
062238   0000000470010000604067CACIVIL AIRCRAFT LTO*S     79000005005                     Y080809080809080809080809
062238   0000000600010000669067CAFOREST WILD FIRES        79         0000900              Y080809080809080809080809
062238   0000009990010000669   CA
147840   0000000000000000565074CGH000040134213SMITH COUNTY       INDUSTRY            1120768223
147840   0000000000020000136074 NWABASH
147840   0000000010010000604074CARESIDENT ANTHRACITE COAL   000000001
```

(Page 5 of 6)

Figure AST9-2 - continued.  Sample Output

```
                    EIS/AS MASTER FILE MAINTENANCE PROGRAM  -  NEW MASTER FILE LISTING                                PAGE    1
061280   0000000000000000565067CG
061280   0000000010010000734067CARESIDENT ANTHRACITE COAL 79000040123                   Y080809080809080809080809
061280   0000000020010000669067CARESIDENT BITUMINOUS COAL 79000020010                   Y080809080809080809080809
061280   0000000030010000734067CARESIDENT DISTILLATE OIL  79000009750                   Y080809080809080809080809
061280   0000000040010000669067CARESIDENTIAL RESIDUAL OIL 79000008900                   Y080809080809080809080809
061280   0000000050010000669067CARESIDENTIAL NATURAL GAS  79000023550                   Y080809080809080809080809
061280   0000000060010000734067CARESIDENTIAL WOOD         79000000050                   Y080809080809080809080809
061280   0000000070010000669067CACOMM-INST ANTHRACITE COAL79000023500                   Y080809080809080809080809
061280   0000000080010000669067CACOMM-INST BITUMINOUS COAL79000034750                   Y080809080809080809080809
061280   0000000090010000734067CACOMM-INST DISTILLATE OIL 79000042100                   Y080809080809080809080809
061280   0000000100010000669067CACOMM-INST RESIDUAL OIL   79000000390                   Y080809080809080809080809
061280   0000000110010000669067CACOMM-INST NATURAL GAS    79000008750                   Y080809080809080809080809
061280   0000000120010000734067CACOMM-INST WOOD           79000000005                   Y080809080809080809080809
061280   0000000130010000669067CAINDUSTRY ANTHRACITE COAL 79000098750                   Y080809080809080809080809
061280   0000000140010000669067CAINDUSTRY BITUMINOUS COAL 79000123400                   Y080809080809080809080809
061280   0000000150010000734067CAINDUSTRIAL COKE          79000009650                   Y080809080809080809080809
061280   0000000160010000669067CAINDUSTRIAL DISTILLATE OIL79000021500                   Y080809080809080809080809
061280   0000000170010000669067CAINDUSTRIAL RESIDUAL OIL  79000000980                   Y080809080809080809080809
061280   0000000180010000734067CAINDUSTRIAL NATURAL GAS   79000056900                   Y080809080809080809080809
061280   0000000190010000669067CAINDUSTRIAL WOOD          79000000025                   Y080809080809080809080809
061280   0000000200010000669067CAINDUSTRIAL PROCESS GAS   79000002350                   Y080809080809080809080809
061280   0000009990010000799    CA
061280   0000010000000000453067SG79
061280   0000010010010000474067SARESIDENT ANTHRACITE COAL 79000059850                   Y080809080809080809080809
061280   0000010010110000474067SDRESIDENT ANTHRACITE COAL 79000059850                   Y080809080809080809080809
061280   0000010013510000344067SDRESIDENT ANTHRACITE COAL 79000059850                   Y080809080809080809080809
061280   0000010019910000344067SDRESIDENT ANTHRACITE COAL 79000059850                   Y080809080809080809080809
061280   0000019990010000474    CA
061280   0005000000000000453067SG
061280   0005000010110000344067SDRESIDENT ANTHRACITE COAL 79000059850
061280   0005000012210000344067SDRESIDENT ANTHRACITE COAL 79000059850                   Y080809080809080809080809
061280   0005000017010000344067SDRESIDENT ANTHRACITE COAL 79000059850
061280   0005009990010000344    CA
061280   0006110000000000453067SG79
061280   0006119990010000344    CA
061280   0999990000000000453067SG79
061280   0999990019910000344067SDRESIDENT ANTHRACITE COAL 79000059850                   Y080809080809080809080809
061280   0999999990010000344    CA
062238   0000000000000000453067CG79
062238   0000000000020000136067 NAREA SOURCE TEST - SOME, BUT NOT ALL VALUES OR CATEGORIES
062238   0000000230010000669067CACOMM-INST ON-SITE INCINER79000002350                   Y080809080809080809080809
062238   0000000470010000604067CACIVIL AIRCRAFT LTO'S     79000005005                   Y080809080809080809080809
062238   0000000600010000669067CAFOREST WILD FIRES        79          0000900           Y080809080809080809080809
062238   0000009990010000669    CA
147840   0000000000000000565074CG8000401342135SMITH COUNTY        INDUSTRY         1120788223
147840   0000000000020000136074 WABASH
147840   0000000010010000604074CARESIDENT ANTHRACITE COAL   000000001
```

(Page 6 of 6)

Figure AST9-2 - continued. Sample Output

## EIS/AS Test 10

## Retrieve a Batched Answer File and Produce a Formatted Dump of the Answer File

In this test run, a batched retrieval is performed on the master file and the resulting answer file is sorted before a formatted dump of this file is produced in batch number sequence. To accomplish this, the cataloged procedure ECRTM10 is used first to execute the retrieval language processor program, CRTLNGP (EC0090); the COBOL compiler; and the linkage editor in order to create the generated retrieval program, CRTGENR (EC0100). Then, the cataloged procedure ECRTM20 is used to execute CRTGENR (EC0100). The advantage of using these separate procedures instead of the single retrieval cataloged procedure, ECRTM30, is that the retrieval program does not have to be regenerated from the retrieval specifications each time a new master file is to be used. Next, the cataloged procedure ECSRM10 is used to execute CSRMSTR (EC0110), the master file sort program. The final procedure used is ECRPM30 which executes CRPDUMP (EC0140), the master file formatted dump program.

The retrieval programs were described in Test 7. To produce a batched retrieval, each group of retrieval request cards must be preceded by a $$SELECT control card; the last retrieval control card should be a $$END card. The batched retrieval specification cards are used as input to CRTLNGP (EC0090). In this run, five retrievals are batched. Note that retrievals can only be batched when the retrieval requests are in the EIS/PS retrieval language.

The master file sort program, CSRMSTR (EC0110), sorts batched retrieval answer files into the sequence required for their use as input to either CRPMSTR (EC0130), the detailed report program, or CRPDUMP (EC0140), the formatted dump program. In addition, this program can be used to sort out-of-sequence master files into the standard master file sequence.

The option card for CSRMSTR (EC0110) specifies the sequence into which the master or answer file is to be sorted. By entering BATCH in card columns 1 through 5, the BATCH option can be specified to sort a batched answer file into batch number sequence. However, if STND is entered in card columns 1 through 4, the STND option is specified and the master file will be sorted into the standard master file sequence; i.e., the sequence created by the master file maintenance program, CFMMSTR (EC0070). If no option card is entered, a default of STND is assumed. If the option card is blank or if any invalid characters occur within columns 1 through 5, the run will be aborted.

An answer file produced by batched retrievals should always be sorted by CSRMSTR (EC0110) using the BATCH option to group together the records selected by each retrieval.

Test 4 provides a description of the master file formatted dump program, CRPDUMP (EC0140).

The run stream for this test run contains the JCL needed to generate a batched answer file, sort this file, and produce a formatted dump of this answer file. The run stream is shown in Figure AST10-1 and the sample output from this run stream is shown in Figure AST10-2.

First, the cataloged procedure ECRTM10 is executed. The user must supply the DD (data definition) information for the retrieval specification card file in the GENER step. In this test, the input retrieval specification cards are used to produce a batched answer file.

Next, the run stream executes the cataloged procedure ECRTM20. The input master file used is ECMSTR7 (created in Test 9) and the output answer file produced is named ECANSR1.

To sort the answer file, the cataloged procedure ECSRM10 is executed. Substitutable parameters specify the input file as ECANSR1 (created in the last step) and the sorted output file as ECANSR2. The user must supply the DD information for the option card file in the SORT step. The option specified in this test is BATCH.

The last cataloged procedure executed is ECRPM30. The master file used as input is ECANSR2. The DD information for the option card file in the DUMP step must be supplied by the user. The option card is not present in this run stream causing the default options to be in effect.

```
//ASTEST10 JOB    (ACCOUNTING INFO)
//*
//*   RETRIEVE A BATCH ANSWER FILE FROM THE MASTER FILE AND
//*   PRODUCE A FORMATTED DUMP OF THE ANSWER FILE
//*
//TEST10A EXEC ECRTR10
//*
//*   GENERATE THE RETRIEVAL LOAD MODULE USING THE
//*   BATCH SPECIFICATIONS
//*
//GENER.INPUT DD *
$$SELECT      0 1 2
COUNTY                            = '2320'                          AND
CATEGORY-NUMBER                   = '032'
$$SELECT
COUNTY                            = '1780'                          AND
CAT-POLLUTANT-ID                  = '43101'
$$SELECT
(COUNTY                           = '0015'                          OR
COUNTY                            = '0680')                         AND
PROJECTED-YEAR                    = '83'
$$SELECT
STATE                             = '06'                            AND
COUNTY                            = '2258'
$$SELECT
AQCR                              = '200'
$$END
//TEST10B EXEC ECRTR20,
//      MSTRFIL=FCMSTR7,
//      ANSRFIL=FCANSR1
//*
//*   EXECUTE THE GENERATED RETRIEVAL PROGRAM FROM
//*   STEP A ON THE MASTER FILE FROM TEST 9
//*
//TEST10C EXEC ECSRM10,
//      OLDMSTR=FCANSR1,
//      NEWMSTR=FCANSR2
//*
//*   SORT THE ANSWER FILE FROM STEP B IN BATCH ORDER
//*   IN PREPARATION FOR THE REPORT
//*
//SORT.OPTIONS DD *
BATCH
//TEST10D EXEC ECRPM30,
//      MSTRFIL=FCANSR2
//*
//*   PRODUCE A FORMATTED DUMP OF THE SORTED ANSWER
//*   FILE FROM STEP C
//*
//DUMP.OPTIONS DD *
```

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Figure AST10-1. Run Stream

```
                       EIS/AS RETRIEVAL LANGUAGE PROCESSOR PROGRAM - DIAGNOSTIC REPORT                 PAGE     1

PROGRAM NAME: CRTLNGP (EC0090)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980

INPUT (CONTROL CARDS):
*$SELECT        0 1 2
COUNTY                          = '2320'                    AND
CATEGORY-NUMBER                 = '032'
$$SELECT
COUNTY                          = '1780'                    AND
CAT-POLLUTANT-ID                = '43101'
$$SELECT
(COUNTY                         = '0015'                    OR
COUNTY                          = '0680')                   AND
PROJECTED-YEAR                  = '83'
$$SELECT
STATE                           = '06'                      AND
COUNTY                          = '2238'
$$SELECT
AQCR                            = '200'
$$END

NUMBER OF CONTROL CARDS READ:                    16
NUMBER OF RETRIEVAL SKELETON RECORDS READ:      837
NUMBER OF RETRIEVAL SOURCE RECORDS WRITTEN:     978
NUMBER OF CONDITIONAL MESSAGES:                   0
NUMBER OF ABORT MESSAGES:                         0


- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

                       EIS/AS GENERATED RETRIEVAL PROGRAM - DIAGNOSTIC REPORT                          PAGE     1
PROGRAM NAME: CRTGENP (EC0100)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980


NUMBER OF MASTER FILE RECORDS READ:         371
NUMBER OF MASTER FILE RECORDS WRITTEN:       42
NUMBER OF CONDITIONAL MESSAGES:               0
NUMBER OF ABORT MESSAGES:                     0
```

(Page 1 of 3)

Figure AST10-2. Sample Output

```
                          EIS/AS MASTER FILE SORT PROGRAM  -  DIAGNOSTIC REPORT                              PAGE     1

PROGRAM NAME: CSRMSTR (EC0110)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980

SORT OPTION SPECIFIED: BATCH


NUMBER OF RECORDS READ:                    92
NUMBER OF RECORDS WRITTEN:                 92
NUMBER OF DIAGNOSTIC MESSAGES:              0



- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -



                     EIS/AS MASTER FILE FORMATTED DUMP PROGRAM  -  DIAGNOSTIC REPORT                         PAGE     1

PROGRAM NAME: CRPDUMP (EC0140)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980

OPTIONS IN EFFECT:  55 LINES PER PAGE;         0 RECORDS SKIPPED;      ALL RECORDS TO BE DUMPED

*** CRPDUMP 003 CONDITIONAL - NO VALID LINE SPECIFICATION - DEFAULT OF 55 ASSUMED
*** CRPDUMP 004 CONDITIONAL - NO VALID VALUE SPECIFIED FOR NUMBER OF RECORDS TO BE SKIPPED - DUMP STARTS AT FIRST RECORD
*** CRPDUMP 005 CONDITIONAL - NO VALID VALUE SPECIFIED FOR NUMBER OF RECORDS TO BE DUMPED - ENTIRE FILE DUMPED

NUMBER OF DESCRIPTION RECORDS DUMPED:              8
NUMBER OF CATEGORY RECORDS DUMPED:                82
NUMBER OF COMMENT RECORDS DUMPED:                  2
TOTAL NUMBER OF RECORDS READ:                     92
```

(Page 2 of 3)

Figure AST10-2 - continued. Sample Output

```
                                        EIS/AS MASTER FILE FORMATTED DUMP                                                  PAGE    1

     STATE=42   COUNTY=2320   GEOGR/SUBALLOC/#=00000   CATEGRY/#=000   DISAGGR/#=00   RECORD/TYPE/(KEY)=0   LINE/#=000   BATCH=0
AQCR=204 RC/TYP=CG YR=75 DY=    AIR/BSIN=    SMSA=     AREA=                MJ/ACT=                     PLT/ID=      BSE/YR=  PRJD/YR=
RURL/POP/%=   POPUL=            AQCR/NM=                        SUBAL/TECHNQ/CD=   SUBAL/TECHNQ/DESC=                      DEFND/AREA/CD=
SULFUR/CONTENTS: (ANTHRACT/COAL=   ,BITUMNS/COAL=10,DISTILLT/OIL=02,RESID/OIL=18)  ASH/CONTENTS: (ANTHRACT/COAL=   ,BITUMNS/COAL=091)
#/UTM/COORDS=0      1ST: (ZONE=  ,HORIZ=     ,VERT=      )   2ND: (ZONE=  ,HORIZ=     ,VERT=      )   3RD: (ZONE=  ,HORIZ=     ,VERT=      )
                    4TH: (ZONE=  ,HORIZ=     ,VERT=      )   5TH: (ZONE=  ,HORIZ=     ,VERT=      )   6TH: (ZONE=  ,HORIZ=     ,VERT=      )
SOURCE/TYPE=   LENGTH/AREA=          LENGTH/AREA/UNITS/CODE=      SIP/ESTIMATES:  (TSP=01600, SO2=0400, NOX=8000, HC=10400, CO=53200)
POP/CODE=1  VEH: (GAS/LGT=0016085 GAS/HEV=000466 DIESL/HEV=001935)  MVMILES/RDS: (LIM/ACCS=        RUR=          SUB=          URB=          )
NEDS/A7/FLG= S EIS/FLGS: (CARD/1=S,CARD/2=S,CARD/3=S,CARD/4=S,CARD/5=S,CARD/6=S)  #/POLL=05
** POLL/ID      POLL/NAME      ATTNMNT/STATUS AQMA/# EIS/FLG/CRD/7  ** POLL/ID      POLL/NAME      ATTNMNT/STATUS AQMA/# EIS/FLG/CRD/7  **
**  11101    PARTICULATES            U                     S        **  42602    NITROGEN OXIDES         U                     S        **
**  42101                            U                     S        **  42401    SULFUR DIOXIDE          U                     S        **
**  43101    HYDROCARBONS            U                     S        **                                                                  **
-----------------------------------------------------------------------------------------------------------------------------------------

     STATE=42   COUNTY=2320   GEOGR/SUBALLOC/#=00000   CATEGRY/#=032   DISAGGR/#=00   RECORD/TYPE/(KEY)=1   LINE/#=000   BATCH=0
AQCR=204  REC/TYPE=CA  CATEGRY/DESC=MED DUTY GAS VEH RURAL RD  YR/OF/INFO=    PRCSS/RATE=               CATEGRY/ADJ=           UNITS/CD=
UNITS/CD/DESC=                  UNIFRM/THRUPT=   MNTHLY/THRUPT/%: (JAN=  ,FEB=  ,MAR=  ,APR=  ,MAY=  ,JUN=  ,JUL=  ,AUG=  ,SEP=  ,OCT=
NOV=  ,DEC=  )  HRS/PER/DAY=     DAYS/PER/WK=    WKS/PER/YR=      THRUPT/RATIO=        MAX/HRLY/THRUPT=              DATA/CONFIDENCE/RATNG=
NITRG/%=        SULF/%=     ASH/%=       HEAT/CONT=          UNIFRM/HRLY/THRUPT=    HRLY/THRUPT/%: (00=  ,  ,  ,03=  ,  ,  ,06=  ,  ,  ,09=
  ,  ,12=  ,  ,  ,15=  ,  ,  ,18=  ,  ,  ,21=  ,  ,  )  NEDS/A7/COMM=                                INFO/SOURCE/CODE=
INFO/SRCE/MARK=                              EIS/FLG/1=S  EIS/FLG/2=S  EIS/FLG/3=S  EIS/FLG/4=S  NEDS/FLG=S  NEDS/A7/FLG=S  #/POLL=05
POLL/ID EMIS/FACTR EF/CNF/RTNG EF/SRC/CD EF/ORIG POLL/SPC/DATA NEDS/A7/EMIS    POLL/NAME     EIS/FLG/5 EMIS/EST CONF/RTNG MX/HRLY/EMS
11101    0000001363      0                  F                               SUSPENDED PART.     C       0000033       0
42101    0000001363      0                  F                               SUSPENDED PART.     C       0000033       0
42401    0000000180      0                  F                               SULFUR DIOXIDE      C       0000004       0
42602    0000004590      0                  F                                  N  OXIDES        C       0000107       0
43101                                       F        0040630SUS             HYDROCARBONS        S       0000000       0
-----------------------------------------------------------------------------------------------------------------------------------------

     STATE=42   COUNTY=1780   GEOGR/SUBALLOC/#=00000   CATEGRY/#=000   DISAGGR/#=00   RECORD/TYPE/(KEY)=0   LINE/#=000   BATCH=1
AQCR=200 RC/TYP=CG YR=75 DY=    AIR/BSIN=    SMSA=     AREA=                MJ/ACT=                     PLT/ID=      BSE/YR=  PRJD/YR=
RURL/POP/%=   POPUL=            AQCR/NM=                        SUBAL/TECHNQ/CD=   SUBAL/TECHNQ/DESC=                      DEFND/AREA/CD=
SULFUR/CONTENTS: (ANTHRACT/COAL=   ,BITUMNS/COAL=10,DISTILLT/OIL=02,RESID/OIL=18)  ASH/CONTENTS: (ANTHRACT/COAL=   ,BITUMNS/COAL=091)
#/UTM/COORDS=0      1ST: (ZONE=  ,HORIZ=     ,VERT=      )   2ND: (ZONE=  ,HORIZ=     ,VERT=      )   3RD: (ZONE=  ,HORIZ=     ,VERT=      )
                    4TH: (ZONE=  ,HORIZ=     ,VERT=      )   5TH: (ZONE=  ,HORIZ=     ,VERT=      )   6TH: (ZONE=  ,HORIZ=     ,VERT=      )
SOURCE/TYPE=   LENGTH/AREA=          LENGTH/AREA/UNITS/CODE=      SIP/ESTIMATES:  (TSP=01100, SO2=0500, NOX=9200, HC=11100, CO=57300)
POP/CODE=3  VEH: (GAS/LGT=0018037 GAS/HEV=000525 DIESL/HEV=001703)  MVMILES/RDS: (LIM/ACCS=        RUR=          SUB=          URB=          )
NEDS/A7/FLG= S EIS/FLGS: (CARD/1=S,CARD/2=S,CARD/3=S,CARD/4=S,CARD/5=S,CARD/6=S)  #/POLL=05
** POLL/ID      POLL/NAME      ATTNMNT/STATUS AQMA/# EIS/FLG/CRD/7  ** POLL/ID      POLL/NAME      ATTNMNT/STATUS AQMA/# EIS/FLG/CRD/7  **
**  42401    SULFUR DIOXIDE          U                     S        **  43101    HYDROCARBONS            U                     S        **
**  42101                            U                     S        **  11101    PARTICULATES            U                     S        **
**  42602    NITROGEN OXIDES         U                     S        **                                                                  **
```

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Figure AST10-2 - continued. Sample Output

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## EIS/AS Test 11 - Ad Hoc

## Generate All Non-Abortive Error Messages of the Emission Factor File Edit-Maintenance Program

In this test run, all non-abortive error messages of CEMEFAC (EC0020) are generated using the cataloged procedure ECEME10 which executes CSREFTR (EC0010), the emission factor file transaction sort program; and CEMEFAC (EC0020), the emission factor file edit-maintenance program.

Specially coded emission factor transactions are used to generate the error messages of CEMEFAC (EC0020). These transactions are sorted by CSREFTR (EC0010) into the sequence required by CEMEFAC (EC0020). See Test 1 for a discussion of CSREFTR (EC0010) and CEMEFAC (EC0020).

The run stream for this test run contains the JCL needed to update the test emission factor file created in Test 1 with the specially coded emission factor file transactions which cause the error messages to be generated. This run stream is shown in Figure AST11-1.

Substitutable parameters are used in the run stream to supply the names of the input and output emission factor files. The names are ECEMFL1 (created in Test 1) and ECEMFL2, respectively. The DD (data definition) information for the input transactions and the option card file is supplied at the end of the run stream.

The FLAGW and LIST options are purposely specified incorrectly so that messages 3 and 4 will be generated. Since there are no warning messages contained in CEMEFAC (EC0020), the default of NOFLAGW (indicated by message 3) will not impede the purpose of this test. Error messages 1, 2, 6, 7, 9, 28, 30, and 36 are not generated since they are abortive in nature. Sample output produced by this run stream is shown in Figure AST11-2.

```
//ASTEST11 JOB    (ACCOUNTING INFO)
//*
//*   GENERATE ALL NON-ABORTIVE ERROR MESSAGES OF THE
//*   EMISSION FACTOR FILE EDIT-MAINTENANCE PROGRAM
//*
//TEST11A EXEC ECEME10,
//       OLDEMFC=FCEMFL1,
//       NEWEMFC=FCEMFL2
//*
//*   EDIT TRANSACTIONS WHICH HAVE BEEN SPECIALLY
//*   CODED TO GENERATE THE ERROR MESSAGES OF
//*   CEMEFAC (EC00020)
//*
//SORT.INPUT DD *
STCNTYSUBAICATDI        YYDDD                                                  2D
000000000000111004#POLID66123EMISSFACTRC                                        3A
0612800000000300F       79297                                                   1A
1122223333344455        66123   111222333                                       4B
1122223333344455        66123   111222333                                       1A
1122223333344455        66123   NITSULASH                                       1A
4455556666688822        66222                                                   2A
4455556666688622F 9999966222                                                    3A
5566667777711122        77123                                                   1D
5566667777711122        77123                                                   1A
5566667777711122        77123                                                   1A
5566667777711133        77123                                                   1C
//UPDATE.OPTIONS DD *
80005 FLAGG LAST
```

Figure AST11-1. Run Stream

```
                         EIS/AS EMISSION FACTOR FILE TRANSACTION SORT PROGRAM  -  DIAGNOSTIC REPORT                       PAGE     1

PROGRAM NAME: CSREFTR (EC0010)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980

NUMBER OF INPUT TRANSACTIONS:                            12
NUMBER OF OUTPUT TRANSACTIONS:                           13
```

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Figure AST11-2. Sample Output

```
                        EIS/AS EMISSION FACTOR FILE EDIT-MAINTENANCE PROGRAM  -  DIAGNOSTIC REPORT                          PAGE      1
PROGRAM NAME: CEMEFAC (FC0020)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980

OPTION CARD

80005 FLAGG LAST
                             *** CEMEFAC 003 CONDITIONAL - FLAGN OPTION INVALID, USED DEFAULT OF NOFLAGN

80005 FLAGG LAST
                             *** CEMEFAC 004 CONDITIONAL - LIST OPTION INVALID, USED DEFAULT OF NOLIST

  CONTROL DATE IS 80005,  ERROR OPTION IS NOFLAGN,  LIST OPTION IS NOLIST



STCNTYSUBALCATDI        YYDDD                                                 2D
                             *** CEMEFAC 034 ERROR - ACTION CODE INCOMPATIBLE WITH CARD TYPE - CARD REJECTED
                             *** CEMEFAC 005 ERROR - COLUMN 1, STATE INVALID - CARD REJECTED
                             *** CEMEFAC 008 ERROR - COLUMN 3, COUNTY NOT NUMERIC - CARD REJECTED
                             *** CEMEFAC 010 ERROR - COLUMN 7, SUBALLOCATION NOT NUMERIC - CARD REJECTED
                             *** CEMEFAC 011 ERROR - COLUMN 12, CATEGORY NOT NUMERIC - CARD REJECTED
                             *** CEMEFAC 023 ERROR - COLUMN 15, DISAGGREGATION NOT NUMERIC - CARD REJECTED
                             *** CEMEFAC 012 ERROR - COLUMN 24, EIS/AS DATE INVALID - CARD REJECTED
000000000011100##POLID66123EMISSFACTRC                                        3A
                             *** CEMEFAC 024 ERROR - COLUMN 17, EF ORIGIN INVALID - CARD REJECTED
                             *** CEMEFAC 037 ERROR - COLUMN 17, EF ORIGIN MUST BE F FOR NEDS CATEGORY - CARD REJECTED
                             *** CEMEFAC 031 ERROR - COLUMN 18, INVALID EF SOURCE TYPE  -CARD REJECTED
                             *** CEMEFAC 019 ERROR - COLUMN 19, POLLUTANT ID  INVALID - CARD REJECTED
                             *** CEMEFAC 013 ERROR - COLUMN 29, EMISSION FACTOR NOT NUMERIC -  CARD REJECTED
                             *** CEMEFAC 032 ERROR - COLUMN 39, EF CONFIDENCE LEVEL INVALID - CARD REJECTED
0612600000000300F       79297                                                 1A
                             *** CEMEFAC 020 ERROR - ADD SPECIFIED FOR EXISTING EIS/AS EMF RECORD - CARD REJECTED

1122223333344455        66123   111222333                                     4B
                             *** CEMEFAC 017 ERROR - COLUMN 79, CARD TYPE INVALID - CARD REJECTED
                             *** CEMEFAC 018 ERROR - COLUMN 80, ACTION CODE INVALID - CARD REJECTED

1122223333344455        66123   111222333                                     1A
                             *** CEMEFAC 027 ERROR - NITROGEN FLAG MUST BE N TO HAVE NITROGEN CONTENT - CARD REJECTED
                             *** CEMEFAC 025 ERROR - ASH FLAG MUST BE A TO HAVE ASH CONTENT PRESENT - CARD REJECTED
```

(Page 2 of 3)

Figure AST11-2 - continued. Sample Output

```
              EIS/AS EMISSION FACTOR FILE EDIT-MAINTENANCE PROGRAM  -  DIAGNOSTIC REPORT                  PAGE    2

                   *** CEMEFAC 026 ERROR - SULFUR FLAG MUST BE S IF HAVE SULFUR CONTENT - CARD REJECTED

1122223333344455          66123   NITSULASH                        1A
                   *** CEMEFAC 016 ERROR - COLUMN 32, NITROGEN CONTENT NOT NUMERIC - CARD REJECTED
                   *** CEMEFAC 014 ERROR - COLUMN 30, ASH CONTENT NOT NUMERIC - CARD REJECTED
                   *** CEMEFAC 015 ERROR - COLUMN 35, SULFUR CONTENT NOT NUMERIC - CARD REJECTED

4455556666688822          66222                                    2A
                   *** CEMEFAC 035 ERROR - TYPE-2 ADD SPECIFIED FOR NONEXISTENT CATEGORY - CARD REJECTED

4455556666688822F 9999966222                                       3A
                   *** CEMEFAC 033 ERROR - ADD OF POLLUTANT SPECIFIED FOR NONEXISTENT CATEGORY - CARD REJECTED

5566667777711122          77123                                    1D
                   *** CEMEFAC 022 ERROR - DELETE SPECIFIED FOR NONEXISTENT EIS/AS EMF RECORD - CARD REJECTED

5566667777711122          77123                                    1A
                   *** CEMEFAC 029 ERROR - DUPLICATE ADD TRANSACTION - CARD REJECTED

5566667777711133          77123                                    1C
                   *** CEMEFAC 021 ERROR - CHANGE SPECIFIED FOR NONEXISTENT EIS/AS EMF RECORD - CARD REJECTED

NUMBER OF TRANSACTIONS READ:                                 13
NUMBER OF ERRORS DETECTED:                                   24
NUMBER OF WARNINGS DETECTED:                                  0
NUMBER OF TRANSACTIONS REJECTED:                             11
NUMBER OF EMISSION FACTOR FILE RECORDS READ:                682
NUMBER OF EMISSION FACTOR FILE RECORDS WRITTEN:             683

PROGRAM NAME: CEMEFAC (EC0020)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980
```

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Figure AST11-2 - continued. Sample Output

## EIS/AS Test 12 - Ad Hoc

### Generate All Non-Abortive Error Messages of the Master File Transaction Edit Program

In this test run, all non-abortive error messages of CEDMSTR (EC0040) are generated using the cataloged procedure ECEDT10 which executes CEDMSTR (EC0040), the master file transaction edit program.

Specially coded master file transactions are used to generate the error messages of CEDMSTR (EC0040). See EIS/AS Test 3 for a discussion of CEDMSTR (EC0040).

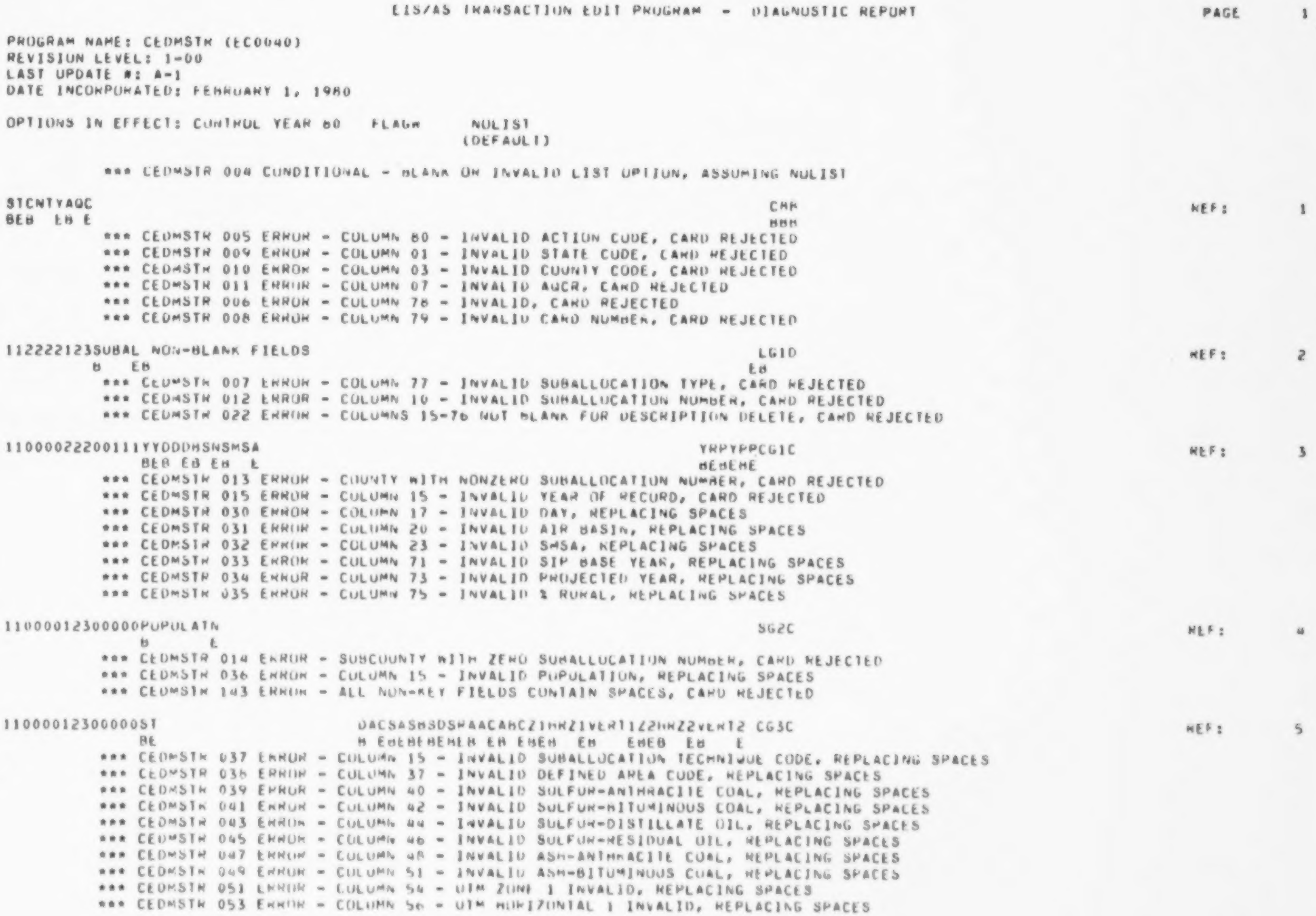
The run stream for this test run contains the JCL needed to edit master file transactions and create a file containing master file internal transactions. The specially coded master file transactions are also contained in the run stream which is shown in Figure AST12-1.

A substitutable parameter is used to supply a name for the internal transaction file output from CEDMSTR (EC0040). The name of this file is ECINTR3. The DD (data definition) information for the input transaction file and the option card file is also supplied in the run stream.

The LIST option is misspelled on the option card in order to generate message 4 which indicates that a default of NOLIST is assumed by the program. The FLAGW option is specified so that the warning messages will not be suppressed, therefore, message 3 (which indicates a default of NOFLAGW) will not be generated in this test. Error messages 1, 2, and 144 are not generated since they are abortive in nature. Sample output produced by this run stream is shown in Figure AST12-2.

```
//ASTEST12 JOB     (ACCOUNTING INFO)
//*
//*   GENERATE ALL NON-ABORTIVE ERROR MESSAGES OF THE MASTER FILE
//*   TRANSACTION EDIT PROGRAM
/*
//TEST12A EXEC ECEDIT10,
//        INTRTRN=ECINTR3
//*
//*   EDIT MASTER FILE TRANSACTIONS SPECIALLY CODED
//*   TO GENERATE THE ERROR MESSAGES OF CEDMSTR (ECU040)
//*
//EDIT.INPUT DD *
STCNTYAWC                                                                   CAB
112222123SUBAL NON-BLANK FIELDS                                             CG1D
11000022200111YYDUDBSNSMSA                                            YRPYPPCG1C
11000012300000POPULATN                                                      SG2C
11000012300000SI                            DACSASBSDSBAACABCZ1HRZ1VERT1Z2HRZ2VERT2 CG3C
11000012300000Z3HRZ3VERT3Z4HRZ4VERT4Z5HRZ5VERT5Z6HRZ6VERT6SLNGTHARUC        CG4C
11000012300000TSPESSO2ENOXFHCESICUFST                                       CG5C
11000012300000 PLVFHGASHVYGASHVYDSLLIMACCRURALRSUBURBURBANRD                CG6C
11000012300000PLT01                *        PLT02                *          CG7C
1100001230000011101 NON-BLANK FIELDS        43101 NON-BLANK FIELDS          CG7D
110000123                                                                   N0A
110000123 NON-BLANK FIELDS                                                  N0D
11000012300000CATAG                           YRPROCESSRTCAIFGADUC          CA1C
11000012300000011100MTHRUPUT PERCENTAGES      25853RT10HRLYTHRPUT NITSUASH  CA2A
11000012300000011100                                                        CA2A
11000012300000011100HTHRUPUT PERCENTAGES                                    CA3A
11000012300000011100                                                        CA3A
11000012300000011100POLTDEMISSFACTR 0*           A7EMISS                    CA5A
1100001230000001110043101          A                                        CA5A
1100001230000001110043101          B                                        CA5C
1100001230000001110011101 NON-BLANK FIELDS                                  CA5D
11000012300000111AGLIN NON-BLANK FIELDS                                     R2D
11000012300000085                                                           CG1A
11000012300000011100 NON-BLANK FIELDS                                       CD1D
11000012300000076                        2171115125125115024903881018029933520 CG3C
1100001230000019020032000120150390002001004000011005030000                  CG4C
1100001230000011101                S        43101                S          CG7C
11000012300000011100N01MP02030405060708091OMP                   C           CA2A
11000012300000011100Y                                           C           CA2C
11000012300000011100N010203HP040506070809HP01020304050607010201020304       CA3A
//EDIT.OPTIONS DD *
BU FLAGW    LOST
```

Figure AST12-1.  Run Stream



```
                                       EIS/AS TRANSACTION EDIT PROGRAM  -  DIAGNOSTIC REPORT                                    PAGE      1
PROGRAM NAME: CEDMSTR (EC0040)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980

OPTIONS IN EFFECT: CONTROL YEAR 80   FLAGW     NULIST
                                              (DEFAULT)

          *** CEDMSTR 004 CONDITIONAL - BLANK OR INVALID LIST OPTION, ASSUMING NULIST

STCNTYAQC                                                                     CHR                                        REF:      1
BEB  EB E                                                                     BBB
          *** CEDMSTR 005 ERROR - COLUMN 80 - INVALID ACTION CODE, CARD REJECTED
          *** CEDMSTR 009 ERROR - COLUMN 01 - INVALID STATE CODE, CARD REJECTED
          *** CEDMSTR 010 ERROR - COLUMN 03 - INVALID COUNTY CODE, CARD REJECTED
          *** CEDMSTR 011 ERROR - COLUMN 07 - INVALID AQCR, CARD REJECTED
          *** CEDMSTR 006 ERROR - COLUMN 78 - INVALID, CARD REJECTED
          *** CEDMSTR 008 ERROR - COLUMN 79 - INVALID CARD NUMBER, CARD REJECTED

112222123SUBAL NON-BLANK FIELDS                                               LGID                                       REF:      2
         B   EB                                                              EB
          *** CEDMSTR 007 ERROR - COLUMN 77 - INVALID SUBALLOCATION TYPE, CARD REJECTED
          *** CEDMSTR 012 ERROR - COLUMN 10 - INVALID SUBALLOCATION NUMBER, CARD REJECTED
          *** CEDMSTR 022 ERROR - COLUMNS 15-76 NOT BLANK FOR DESCRIPTION DELETE, CARD REJECTED

11000022200111YYDDDBSNSMSA                                             YRPYPPCGIC                                        REF:      3
              BEB EB EB  E                                             BEBEBE
          *** CEDMSTR 013 ERROR - COUNTY WITH NONZERO SUBALLOCATION NUMBER, CARD REJECTED
          *** CEDMSTR 015 ERROR - COLUMN 15 - INVALID YEAR OF RECORD, CARD REJECTED
          *** CEDMSTR 030 ERROR - COLUMN 17 - INVALID DAY, REPLACING SPACES
          *** CEDMSTR 031 ERROR - COLUMN 20 - INVALID AIR BASIN, REPLACING SPACES
          *** CEDMSTR 032 ERROR - COLUMN 23 - INVALID SMSA, REPLACING SPACES
          *** CEDMSTR 033 ERROR - COLUMN 71 - INVALID SIP BASE YEAR, REPLACING SPACES
          *** CEDMSTR 034 ERROR - COLUMN 73 - INVALID PROJECTED YEAR, REPLACING SPACES
          *** CEDMSTR 035 ERROR - COLUMN 75 - INVALID % RURAL, REPLACING SPACES

11000012300000POPULATN                                                        SG2C                                       REF:      4
              B      E
          *** CEDMSTR 014 ERROR - SUBCOUNTY WITH ZERO SUBALLOCATION NUMBER, CARD REJECTED
          *** CEDMSTR 036 ERROR - COLUMN 15 - INVALID POPULATION, REPLACING SPACES
          *** CEDMSTR 143 ERROR - ALL NON-KEY FIELDS CONTAIN SPACES, CARD REJECTED

11000012300000ST                    DACSASBSDSRAACABCZ1HRZ1VERT1Z2HRZ2VERT2 CG3C                                         REF:      5
              BE                    B EBEBEBEBEB EB EBEB  EB   EBEB  EB   E
          *** CEDMSTR 037 ERROR - COLUMN 15 - INVALID SUBALLOCATION TECHNIQUE CODE, REPLACING SPACES
          *** CEDMSTR 038 ERROR - COLUMN 37 - INVALID DEFINED AREA CODE, REPLACING SPACES
          *** CEDMSTR 039 ERROR - COLUMN 40 - INVALID SULFUR-ANTHRACITE COAL, REPLACING SPACES
          *** CEDMSTR 041 ERROR - COLUMN 42 - INVALID SULFUR-BITUMINOUS COAL, REPLACING SPACES
          *** CEDMSTR 043 ERROR - COLUMN 44 - INVALID SULFUR-DISTILLATE OIL, REPLACING SPACES
          *** CEDMSTR 045 ERROR - COLUMN 46 - INVALID SULFUR-RESIDUAL OIL, REPLACING SPACES
          *** CEDMSTR 047 ERROR - COLUMN 48 - INVALID ASH-ANTHRACITE COAL, REPLACING SPACES
          *** CEDMSTR 049 ERROR - COLUMN 51 - INVALID ASH-BITUMINOUS COAL, REPLACING SPACES
          *** CEDMSTR 051 ERROR - COLUMN 54 - UTM ZONE 1 INVALID, REPLACING SPACES
          *** CEDMSTR 053 ERROR - COLUMN 56 - UTM HORIZONTAL 1 INVALID, REPLACING SPACES
```

(Page 1 of 5)

Figure AST12-2. Sample Output

```
                                      EIS/AS TRANSACTION EDIT PROGRAM  -  DIAGNOSTIC REPORT                    PAGE      2
          *** CEDMSTR 055 ERROR - COLUMN 60 - UTM VERTICAL 1 INVALID, REPLACING SPACES
          *** CEDMSTR 057 ERROR - COLUMN 65 - UTM ZONE 2 INVALID, REPLACING SPACES
          *** CEDMSTR 059 ERROR - COLUMN 67 - UTM HORIZONTAL 2 INVALID, REPLACING SPACES
          *** CEDMSTR 061 ERROR - COLUMN 71 - UTM VERTICAL 2 INVALID, REPLACING SPACES
          *** CEDMSTR 143 ERROR - ALL NON-KEY FIELDS CONTAIN SPACES, CARD REJECTED

1100001230000UZ3HRZ3VERT3Z4HRZ4VERT4Z5HRZ5VERT5Z6HRZ6VERT6SLNGTHAREC        C64C                    REF:     6
              BEB  EH    EBEB  EH    EBEB  EB    EBEB  EB   EBB      EBE
          *** CEDMSTR 063 ERROR - COLUMN 15 - UTM ZONE 3 INVALID, REPLACING SPACES
          *** CEDMSTR 065 ERROR - COLUMN 17 - UTM HORIZONTAL 3 INVALID, REPLACING SPACES
          *** CEDMSTR 067 ERROR - COLUMN 21 - UTM VERTICAL 3 INVALID, REPLACING SPACES
          *** CEDMSTR 069 ERROR - COLUMN 26 - UTM ZONE 4 INVALID, REPLACING SPACES
          *** CEDMSTR 071 ERROR - COLUMN 28 - UTM HORIZONTAL 4 INVALID, REPLACING SPACES
          *** CEDMSTR 073 ERROR - COLUMN 32 - UTM VERTICAL 4 INVALID, REPLACING SPACES
          *** CEDMSTR 075 ERROR - COLUMN 37 - UTM ZONE 5 INVALID, REPLACING SPACES
          *** CEDMSTR 077 ERROR - COLUMN 39 - UTM HORIZONTAL 5 INVALID, REPLACING SPACES
          *** CEDMSTR 079 ERROR - COLUMN 43 - UTM VERTICAL 5 INVALID, REPLACING SPACES
          *** CEDMSTR 081 ERROR - COLUMN 48 - UTM ZONE 6 INVALID, REPLACING SPACES
          *** CEDMSTR 083 ERROR - COLUMN 50 - UTM HORIZONTAL 6 INVALID, REPLACING SPACES
          *** CEDMSTR 085 ERROR - COLUMN 54 - UTM VERTICAL 6 INVALID, REPLACING SPACES
          *** CEDMSTR 087 ERROR - COLUMN 59 - SOURCE TYPE INVALID, REPLACING SPACE
          *** CEDMSTR 088 ERROR - COLUMN 60 - LENGTH OF LINE-LINK-AREA INVALID, REPLACING SPACES
          *** CEDMSTR 089 ERROR - COLUMN 67 - LINE-LINK-AREA CODE INVALID, REPLACING SPACES
          *** CEDMSTR 143 ERROR - ALL NON-KEY FIELDS CONTAIN SPACES, CARD REJECTED

110000123000001SPESSO2ENOXEHCESTCOEST                                       C65C                    REF:     7
              B   EB  EH   EH   EH   E
          *** CEDMSTR 090 ERROR - COLUMN 15 - SIP ESTIMATE TSP INVALID, REPLACING SPACES
          *** CEDMSTR 091 ERROR - COLUMN 20 - SIP ESTIMATE SO2 INVALID, REPLACING SPACES
          *** CEDMSTR 092 ERROR - COLUMN 24 - SIP ESTIMATE NOX INVALID, REPLACING SPACES
          *** CEDMSTR 093 ERROR - COLUMN 28 - SIP ESTIMATE HC INVALID, REPLACING SPACES
          *** CEDMSTR 094 ERROR - COLUMN 33 - SIP ESTIMATE CO INVALID, REPLACING SPACES
          *** CEDMSTR 143 ERROR - ALL NON-KEY FIELDS CONTAIN SPACES, CARD REJECTED

11000012300000 PLVEHGASHVYGASHVYDSLLIMACCRURALRSUBURBURBANRD                C66C                    REF:     8
               BH     EH     EH     EB     EH     EH     EH     E
          *** CEDMSTR 095 ERROR - COLUMN 16 - POPULATION CODE INVALID, REPLACING SPACE
          *** CEDMSTR 096 ERROR - COLUMN 17 - LIGHT VEHICLES-GAS INVALID, REPLACING SPACES
          *** CEDMSTR 097 ERROR - COLUMN 24 - HEAVY VEHICLES-GAS INVALID, REPLACING SPACES
          *** CEDMSTR 098 ERROR - COLUMN 30 - HEAVY VEHICLES-DIESEL INVALID, REPLACING SPACES
          *** CEDMSTR 099 ERROR - COLUMN 36 - LIMITED ACCESS ROADS INVALID, REPLACING SPACES
          *** CEDMSTR 100 ERROR - COLUMN 42 - RURAL ROADS INVALID, REPLACING SPACES
          *** CEDMSTR 101 ERROR - COLUMN 48 - SUBURBAN ROADS INVALID, REPLACING SPACES
          *** CEDMSTR 102 ERROR - COLUMN 54 - URBAN ROADS INVALID, REPLACING SPACES
          *** CEDMSTR 143 ERROR - ALL NON-KEY FIELDS CONTAIN SPACES, CARD REJECTED

11000012300000PLID1                 *        PLID2              *           C67C                    REF:     9
              H  E                  H        H   E              H
          *** CEDMSTR 103 ERROR - COLUMN 15 - POLLUTANT ID 1 INVALID, POLLUTANT 1 REJECTED
          *** CEDMSTR 105 WARNING - COLUMN 35 - REPLACING ATTAINMENT STATUS 1 WITH U
          *** CEDMSTR 106 ERROR - COLUMN 43 - POLLUTANT ID 2 INVALID, POLLUTANT 2 REJECTED
          *** CEDMSTR 108 WARNING - COLUMN 63 - REPLACING ATTAINMENT STATUS 2 WITH U
          *** CEDMSTR 143 ERROR - ALL NON-KEY FIELDS CONTAIN SPACES, CARD REJECTED
```

(Page 2 of 5)

Figure AST12-2 - continued. Sample Output

```
                                        EIS/AS TRANSACTION EDIT PROGRAM  -  DIAGNOSTIC REPORT                              PAGE      3
1100001230000011101 NON-BLANK FIELDS       43101 NON-BLANK FIELDS              CG7D                                        REF:       10
                    B                    E      B                     E
          *** CEDMSTR 023 ERROR - COLS 20-41 NOT BLANK FOR DESCRIPTION POLLUTANT DELETE, COLS 15-41 REJECTED
          *** CEDMSTR 024 ERROR - COLS 48-69 NOT BLANK FOR DESCRIPTION POLLUTANT DELETE, COLS 43-69 REJECTED
          *** CEDMSTR 143 ERROR - ALL NON-KEY FIELDS CONTAIN SPACES, CARD REJECTED

110000123                                                                     NOA                                          REF:       11
         B                                                                    E
          *** CEDMSTR 142 WARNING - COLUMN 10 - REPLACING NEDS COMMENT WITH GENERATED BY EIS/AS

110000123 NON-BLANK FIELDS                                                    NOD                                          REF:       12
         B                                                                    E
          *** CEDMSTR 027 ERROR - COLUMNS 10-77 NOT BLANK FOR NEDS COMMENT DELETE, CARD REJECTED

11000012300000CATAG                          YRPROCESSRTCATEGADUC             CA1C                                         REF:       13
              B E                            BEB       EB      EBE
          *** CEDMSTR 017 ERROR - COLUMN 15 - CATEGORY NUMBER INVALID, CARD REJECTED
          *** CEDMSTR 019 ERROR - AGGREGATE TRANSACTION WITH NONZERO DISAGGREGATE NUMBER, CARD REJECTED
          *** CEDMSTR 109 ERROR - COLUMN 45 - YEAR OF INFORMATION INVALID, REPLACING SPACES
          *** CEDMSTR 110 ERROR - COLUMN 47 - PROCESS RATE INVALID, REPLACING SPACES
          *** CEDMSTR 111 ERROR - COLUMN 56 - CATEGORY ADJUST INVALID, REPLACING SPACES
          *** CEDMSTR 112 ERROR - COLUMN 63 - UNITS CODE INVALID, REPLACING SPACES
          *** CEDMSTR 143 ERROR - ALL NON-KEY FIELDS CONTAIN SPACES, CARD REJECTED

1100001230000011100MTHRUPUT PERCENTAGES     25853RTIUHRLYTHRPUT NITSUASH      CA2A                                         REF:       14
                   BB                       EBEBBEB  EB       EBB EBEB E
          *** CEDMSTR 113 ERROR - COLUMN 20 - UNIFORM MONTHLY INDICATOR INVALID, REPLACING WITH Y
          *** CEDMSTR 115 ERROR - COLUMN 21 - MONTHLY THRUPUT %S WITH Y INDICATOR, REPLACING UNIFORM %S
          *** CEDMSTR 118 ERROR - COLUMN 45 - HRS/DAY INVALID, REPLACING SPACES
          *** CEDMSTR 119 ERROR - COLUMN 47 - DAYS/WK INVALID, REPLACING SPACE
          *** CEDMSTR 120 ERROR - COLUMN 48 - WKS/YR INVALID, REPLACING SPACES
          *** CEDMSTR 121 ERROR - COLUMN 50 - RATIO OF THRUPUT INVALID, REPLACING SPACES
          *** CEDMSTR 122 ERROR - COLUMN 54 - MAX HOURLY THRUPUT INVALID, REPLACING SPACES
          *** CEDMSTR 123 WARNING - COLUMN 64 - REPLACING DATA CONFIDENCE RATING WITH ZERO
          *** CEDMSTR 126 ERROR - COLUMN 65 - % NITROGEN INVALID, REPLACING SPACES
          *** CEDMSTR 127 ERROR - COLUMN 68 - % SULFUR INVALID, REPLACING SPACES
          *** CEDMSTR 128 ERROR - COLUMN 70 - % ASH INVALID, REPLACING SPACES

1100001230000011100                                                           CA2A                                         REF:       15
                   B                                             B
          *** CEDMSTR 114 WARNING - COLUMN 20 - UNIFORM MONTHLY INDICATOR BLANK, ASSUMING Y
          *** CEDMSTR 123 WARNING - COLUMN 64 - REPLACING DATA CONFIDENCE RATING WITH ZERO

1100001230000011100HTHRUPUT PERCENTAGES                                       CA3A                                         REF:       16
                   BB                                                E
          *** CEDMSTR 129 ERROR - COLUMN 20 - UNIFORM HOURLY THRUPUT INDICATOR INVALID, REPLACING WITH Y
          *** CEDMSTR 131 ERROR - COLUMN 21 - HOURLY THRUPUT %S WITH Y INDICATOR, REPLACING UNIFORM %S

1100001230000011100                                                           CA3A                                         REF:       17
                   B
          *** CEDMSTR 130 WARNING - COLUMN 20 - UNIFORM HOURLY THRUPUT INDICATOR BLANK, ASSUMING Y
```

(Page 3 of 5)

Figure AST12-2 - continued. Sample Output

```
                        EIS/AS TRANSACTION EDIT PROGRAM  -  DIAGNOSTIC REPORT                             PAGE      4
11000012300000011100PULIDEMISSFACTR U#       A7EMISS                  CASA                         REF:      18
            R  EB      ERBB       R   E
      *** CEDMSTR 134 ERROR - COLUMN 20 - POLLUTANT ID INVALID, CARD REJECTED
      *** CEDMSTR 135 ERROR - COLUMN 25 - EMISSION FACTOR INVALID, REPLACING SPACES
      *** CEDMSTR 136 WARNING - COLUMN 35 - REPLACING EMISSION FACTOR CONFIDENCE RATING WITH ZERO
      *** CEDMSTR 139 ERROR - COLUMN 36 - EMISSION FACTOR ORIGIN INVALID, REPLACING SPACE
      *** CEDMSTR 140 ERROR - COLUMN 37 - EMISSION FACTOR SOURCE CODE INVALID, REPLACING SPACE
      *** CEDMSTR 141 ERROR - COLUMN 48 - NEDS A7 EMISSION INVALID, REPLACING SPACES

1100001230000011100431O1           A                              CASA                         REF:      19
                                   B
      *** CEDMSTR 137 ERROR - COLUMN 35 - EMISSION FACTOR CONFIDENCE RATING INVALID, REPLACING ZERO

110000123000001110043101           B                              CASC                         REF:      20
                                   B
      *** CEDMSTR 138 ERROR - COLUMN 35 - EMISSION FACTOR CONFIDENCE RATING INVALID, REPLACING SPACE

110000123000001110011101 NON-BLANK FIELDS                         CA5D                         REF:      21
                  B                                              E
      *** CEDMSTR 026 ERROR - COLUMNS 25-76 NOT BLANK FOR CATEGORY POLLUTANT DELETE, CARD REJECTED

1100001230000011AGLIN NON-BLANK FIELDS                            R2D                          REF:      22
          BEB EB                                                 E B
      *** CEDMSTR 018 ERROR - COLUMN 16 - DISAGGREGATE NUMBER INVALID, CARD REJECTED
      *** CEDMSTR 021 ERROR - COLUMN 20 - LINE NUMBER INVALID, CARD REJECTED
      *** CEDMSTR 026 ERROR - COLUMNS 23-77 NOT BLANK FOR EIS/AS COMMENT DELETE, CARD REJECTED
      *** CEDMSTR 029 ERROR - COLUMN 79 - INVALID CARD NUMBER FOR DELETE TRANSACTION, CARD REJECTED

1100001230000085                                                  CG1A                         REF:      23
        BE
      *** CEDMSTR 016 ERROR - COLUMN 15 - YEAR OF RECORD GREATER THAN YEAR ON OPTION CARD, CARD REJECTED

1100001230000011100 NON-BLANK FIELDS                              CD1D                         REF:      24
                 B                                               E
      *** CEDMSTR 020 ERROR - DISAGGREGATE TRANSACTION WITH ZERO DISAGGREGATE NUMBER, CARD REJECTED
      *** CEDMSTR 025 ERROR - COLUMNS 20-76 NOT BLANK FOR CATEGORY DELETE, CARD REJECTED

1100001230000078                        217111512512511502993881018029933529 CG3C                         REF:      25
                                        BEBEREBEB ER EREB  ER   EBER  EB   E
      *** CEDMSTR 040 CONDITIONAL - COLUMN 40 - SULFUR-ANTHRACITE COAL OUT OF RANGE
      *** CEDMSTR 042 CONDITIONAL - COLUMN 42 - SULFUR-BITUMINOUS COAL OUT OF RANGE
      *** CEDMSTR 044 CONDITIONAL - COLUMN 44 - SULFUR-DISTILLATE OIL OUT OF RANGE
      *** CEDMSTR 046 CONDITIONAL - COLUMN 46 - SULFUR-RESIDUAL OIL OUT OF RANGE
      *** CEDMSTR 048 CONDITIONAL - COLUMN 48 - ASH-ANTHRACITE COAL OUT OF RANGE
      *** CEDMSTR 050 CONDITIONAL - COLUMN 51 - ASH-BITUMINOUS COAL OUT OF RANGE
      *** CEDMSTR 052 CONDITIONAL - COLUMN 54 - UTM ZONE 1 OUT OF RANGE
      *** CEDMSTR 054 CONDITIONAL - COLUMN 56 - UTM HORIZONTAL 1 OUT OF RANGE
      *** CEDMSTR 056 CONDITIONAL - COLUMN 60 - UTM VERTICAL 1 OUT OF RANGE
      *** CEDMSTR 058 CONDITIONAL - COLUMN 65 - UTM ZONE 2 OUT OF RANGE
      *** CEDMSTR 060 CONDITIONAL - COLUMN 67 - UTM HORIZONTAL 2 OUT OF RANGE
      *** CEDMSTR 062 CONDITIONAL - COLUMN 71 - UTM VERTICAL 2 OUT OF RANGE
```

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Figure AST12-2 - continued. Sample Output

```
                                        EIS/AS TRANSACTION EDIT PROGRAM  -  DIAGNOSTIC REPORT                             PAGE         5
1100001230000019020032000120150390002001004000011005030000                     CG4C                                       REF:        26
              BEB  EB    EBEB  ER    EBER  ER    ERER  ER    E
          *** CEDMSTR 064 CONDITIONAL - COLUMN 15 - UTM ZONE 3 OUT OF RANGE
          *** CEDMSTR 066 CONDITIONAL - COLUMN 17 - UTM HORIZONTAL 3 OUT OF RANGE
          *** CEDMSTR 068 CONDITIONAL - COLUMN 21 - UTM VERTICAL 3 OUT OF RANGE
          *** CEDMSTR 070 CONDITIONAL - COLUMN 26 - UTM ZONE 4 OUT OF RANGE
          *** CEDMSTR 072 CONDITIONAL - COLUMN 28 - UTM HORIZONTAL 4 OUT OF RANGE
          *** CEDMSTR 074 CONDITIONAL - COLUMN 32 - UTM VERTICAL 4 OUT OF RANGE
          *** CEDMSTR 076 CONDITIONAL - COLUMN 37 - UTM ZONE 5 OUT OF RANGE
          *** CEDMSTR 078 CONDITIONAL - COLUMN 39 - UTM HORIZONTAL 5 OUT OF RANGE
          *** CEDMSTR 080 CONDITIONAL - COLUMN 43 - UTM VERTICAL 5 OUT OF RANGE
          *** CEDMSTR 082 CONDITIONAL - COLUMN 48 - UTM ZONE 6 OUT OF RANGE
          *** CEDMSTR 084 CONDITIONAL - COLUMN 50 - UTM HORIZONTAL 6 OUT OF RANGE
          *** CEDMSTR 086 CONDITIONAL - COLUMN 54 - UTM VERTICAL 6 OUT OF RANGE

1100001230000011101                S       43101                S              CG7C                                       REF:        27
                                   B                            B
          *** CEDMSTR 104 ERROR - COLUMN 35 - ATTAINMENT STATUS 1 INVALID, REPLACING WITH U
          *** CEDMSTR 107 ERROR - COLUMN 63 - ATTAINMENT STATUS 2 INVALID, REPLACING WITH U

1100001230000011100N01MP0203040506070809 10MP                    C              CA2A                                       REF:        28
                      BE                    BE                  B
          *** CEDMSTR 116 ERROR - COLUMN 23 - FEB THRUPUT % INVALID, REPLACING WITH ZERO
          *** CEDMSTR 116 ERROR - COLUMN 43 - DEC THRUPUT % INVALID, REPLACING WITH ZERO
          *** CEDMSTR 117 ERROR - SUM OF MONTHLY THRUPUT %S INVALID, REPLACING W/ UNIFORM THRUPUTS
          *** CEDMSTR 124 ERROR - COLUMN 64 - DATA CONFIDENCE RATING INVALID, REPLACING ZERO

1100001230000011100Y                                             C              CA2C                                       REF:        29
                                                                 R
          *** CEDMSTR 125 ERROR - COLUMN 64 - DATA CONFIDENCE RATING INVALID, REPLACING SPACE

1100001230000011100N010203HP04050607080 9HP0102030405060701020102 0304         CA3A                                       REF:        30
                          BE             BE
          *** CEDMSTR 132 ERROR - COLUMN 27 - HOUR 03 THRUPUT % INVALID, REPLACING WITH ZERO
          *** CEDMSTR 132 ERROR - COLUMN 41 - HOUR 10 THRUPUT % INVALID, REPLACING WITH ZERO
          *** CEDMSTR 133 ERROR - SUM OF HRLY THRUPUT %S INVALID, REPLACING UNIFORM HRLY THRUPUTS
NUMBER OF INPUT TRANSACTIONS:          30
NUMBER OF VALID TRANSACTIONS:          13
NUMBER OF REJECTED TRANSACTIONS:       17
NUMBER OF TRANSACTIONS WRITTEN:        13
NUMBER OF WARNING MESSAGES:             8
NUMBER OF CONDITIONAL MESSAGES:        25
NUMBER OF ERROR MESSAGES:             117
NUMBER OF ABORT MESSAGES:               0
NUMBER OF DISASTER MESSAGES:            0

PROGRAM NAME: CEDMSTR (EC0040)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980
```

(Page 5 of 5)

Figure AST12-2 - continued. Sample Output

## EIS/AS Test 13 - Ad Hoc

### Generate All Non-Abortive Error Messages of the NEDS to EIS/AS Master File Transaction Conversion-Edit Program

In this test run, all non-abortive error messages of CCENETR (EC0030) are generated using the cataloged procedure ECCET10 which executes CCENETR (EC0030), the NEDS to EIS/AS master file transaction conversion edit program.

Specially coded NEDS master file transactions are used to generate the error messages of CCENETR (EC0030). These transactions are input to the program in random order. See EIS/AS Test 2 for a discussion of CCENETR (EC0030).

The run stream for this test run contains the JCL needed to convert NEDS master file transactions to EIS/AS master file internal transactions. The specially coded NEDS transactions are also included in the run stream. This run stream is shown in Figure AST13-1.

A substitutable parameter is used to supply a name for the internal transaction file output from CCENETR (EC0030). The name of this file is ECINTR4. The DD (data definition) information for the input transaction file and the option card file is also supplied in the run stream.

The FLAGW and LIST options are specified incorrectly on the option card in order to generate messages 42 and 43 which indicate that defaults of NOFLAGW and NOLIST, respectively, are assumed by the program. The default of NOFLAGW will not impede the purpose of this test since there are no warning messages issued by CCENETR (EC0030). Error messages 40 and 41 are not generated since they are abortive in nature. Sample output produced by this run stream is shown in Figure AST13-2.

```
//ASTEST13 JOB     (ACCOUNTING INFO)
//*
//*   GENERATE ALL NON-ABORTIVE ERROR MESSAGES OF THE NEDS
//*   TO EIS/AS MASTER FILE TTRANSACTION CONVERSION-EDIT PROGRAM
//*
//TEST13A EXEC ECCF110,
//        INTRTRN=ECINTR4
//*
//*   EDIT NEDS MASTER FILE TRANSACTIONS SPECIALLY CODED TO
//*   GENERATE THE ERROR MESSAGES OF CCENETR (EC0030)
//*
//CONVERT.INPUT DD *
STCNTYABC                                                                      BR0
112222123YYISPFSSO2ENOXEHCESTCOESISASBSOSRAACABCRESACRFSBCLRFSDORESRRESNGRFSRAA1
112222123COMACCOMBCCOMDOCOMROCONGCWINDSACINDSBCCOREINDDOINDROINONGIWDINPG     AA2
112222123INCRESINCININCCARNRESBRNINDRRNCMLTVEHGSHVVEHGOFFHWYHVVEHDOFFHDDLLOCPAA3
112222123AIRMAIRCIVAIRCMVESCVESDVESROEVPGEVPSOLEVPGMLIMACCRURALRSUBURBURBANRDAA4
112222123DIRTRDSDRTASCONACRWNDFRLANDTWLDFIRET/AMANBRNT/AAGRBRNT/AURHTDAYFIRESAA5
112222123BOSCTSPFSTSO2ESNOXESTHCESTICOFSTIM                                    AA7
//CONVERT.OPTIONS DD *
*O FLAGG LOST
```

Figure AST13-1. Run Stream

```
                         NEDS TO EIS/AS CONVERSION-EDIT PROGRAM DIAGNOSTIC REPORT                              PAGE      1

PROGRAM NAME: CCENETR (EC0030)
REVISION LEVEL: I-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980


OPTION CARD

80 FLAGG LOST
          *** CCENETR 042 CONDITIONAL - INVALID FLAGW OPTION, DEFAULT OF NO FLAGW USED

80 FLAGG LOST
          *** CCENETR 043 CONDITIONAL - INVALID LIST OPTION, DEFAULT OF NO LIST USED

    CONTROL DATE IS 80  ,  ERROR OPTION IS NOFLAGW,  LIST OPTION IS NOLIST



                                                                             BH0
STCNTYAQC                                                                    BBB
BEB  EB E
          *** CCENETR 085 ERROR - COLUMN 01 - INVALID STATE-TRANSACTION REJECTED
          *** CCENETR 086 ERROR - COLUMN 03 - INVALID COUNTY-TRANSACTION REJECTED
          *** CCENETR 087 ERROR - COLUMN 07 - INVALID AQCR-TRANSACTION REJECTED
          *** CCENETR 088 ERROR - COLUMN 78 - INVALID ACTION-CODE-TRANSACTION REJECTED
          *** CCENETR 031 ERROR - COLUMN 79 - CARD IS NOT AREA SOURCE CARD-TRANSACTION REJECTED
          *** CCENETR 032 ERROR - COLUMN 80 - INVALID CARD NUMBER-TRANSA  CTION REJECTED

112222123YYTSPESSO2ENOXEHCESTCOESTSASBSDSRAACABCRESACRESBCLRESDORESRRESNGRESWAA1
         BEB   EB  EB  EB   EB   EBEBEBEBEB EB EB   EB    EB   EB EB   EB E
          *** CCENETR 073 ERROR - COLUMN 10 - INVALID YEAR OF RECORD-FIELD REJECTED
          *** CCENETR 074 ERROR - COLUMN 12 - INVALID SIP PARTICULATE EMISSION ESTIMATE-FIELD REJECTED
          *** CCENETR 075 ERROR - COLUMN 17 - INVALID SIP SO2 EMISSION ESTIMATE-FIELD REJECTED
          *** CCENETR 076 ERROR - COLUMN 21 - INVALID SIP NOX EMISSION ESTIMATE-FIELD REJECTED
          *** CCENETR 077 ERROR - COLUMN 25 - INVALID SIP HC EMISSION ESTIMATE-FIELD REJECTED
          *** CCENETR 078 ERROR - COLUMN 30 - INVALID SIP CO EMISSION ESTIMATE-FIELD REJECTED
          *** CCENETR 079 ERROR - COLUMN 35 - INVALID ANTHRACITE COAL SULFUR CONTENTS-FIELD REJECTED
          *** CCENETR 080 ERROR - COLUMN 37 - INVALID BITUMINOUS COAL SULFUR CONTENTS-FIELD REJECTED
          *** CCENETR 081 ERROR - COLUMN 39 - INVALID DISTILLATE OIL SULFUR CONTENTS-FIELD REJECTED
          *** CCENETR 082 ERROR - COLUMN 41 - INVALID RESIDUAL OIL SULFUR CONTENTS-FIELD REJECTED
          *** CCENETR 083 ERROR - COLUMN 43 - INVALID ANTHRACITE COAL ASH CONTENTS-FIELD REJECTED
          *** CCENETR 084 ERROR - COLUMN 46 - INVALID BITUMINOUS COAL ASH CONTENTS-FIELD REJECTED
          *** CCENETR 001 ERROR - COLUMN 49 - INVALID RESIDENTIAL ANTHRACITE COAL-FIELD REJECTED
          *** CCENETR 002 ERROR - COLUMN 54 - INVALID RESIDENTIAL BITUMINOUS COAL-FIELD REJECTED
          *** CCENETR 003 ERROR - COLUMN 60 - INVALID RESIDENTIAL DISTILLATE OIL-FIELD REJECTED
```

(Page 1 of 4)

Figure AST13-2. Sample Output

```
                       NEDS TO EIS/AS CONVERSION-EDIT PROGRAM DIAGNOSTIC REPORT                          PAGE    2

      *** CCENETR 004 ERROR - COLUMN 65 - INVALID RESIDENTIAL RESIDUAL OIL-FIELD REJECTED
      *** CCENETR 005 ERROR - COLUMN 69 - INVALID RESIDENTIAL NATURAL GAS-FIELD REJECTED
      *** CCENETR 006 ERROR - COLUMN 74 - INVALID RESIDENTIAL WOOD-FIELD REJECTED

112222123COMACCOMBCCOMDOCOMRUCONGCWINDSACINDSBCCOKEINDDOINDRUINDNGINDINPG     A42
     B   EB   EB   EB   EB  EBEB    EB     EB  EB   EB   EB   EB EB  E
      *** CCENETR 007 ERROR - COLUMN 10 - INVALID COMM/INST ANTHRACITE COAL-FIELD REJECTED
      *** CCENETR 008 ERROR - COLUMN 15 - INVALID COMM/INST BITUMINOUS COAL-FIELD REJECTED
      *** CCENETR 009 ERROR - COLUMN 20 - INVALID COMM/INST DISTILLATE OIL-FIELD REJECTED
      *** CCENETR 010 ERROR - COLUMN 25 - INVALID COMM/INST RESIDUAL OIL-FIELD REJECTED
      *** CCENETR 011 ERROR - COLUMN 30 - INVALID COMM/INST NATURAL GAS-FIELD REJECTED
      *** CCENETR 012 ERROR - COLUMN 34 - INVALID COMM/INST WOOD-FIELD REJECTED
      *** CCENETR 013 ERROR - COLUMN 36 - INVALID INDUSTRIAL ANTHRACITE COAL-FIELD REJECTED
      *** CCENETR 014 ERROR - COLUMN 42 - INVALID INDUSTRIAL BITUMINOUS COAL-FIELD REJECTED
      *** CCENETR 015 ERROR - COLUMN 48 - INVALID INDUSTRIAL COKE-FIELD REJECTED
      *** CCENETR 016 ERROR - COLUMN 52 - INVALID INDUSTRIAL DISTILLATE OIL-FIELD REJECTED
      *** CCENETR 017 ERROR - COLUMN 57 - INVALID INDUSTRIAL RESIDUAL OIL-FIELD REJECTED
      *** CCENETR 018 ERROR - COLUMN 62 - INVALID INDUSTRIAL NATURAL GAS-FIELD REJECTED
      *** CCENETR 019 ERROR - COLUMN 67 - INVALID INDUSTRIAL WOOD-FIELD REJECTED
      *** CCENETR 020 ERROR - COLUMN 70 - INVALID INDUSTRIAL PROCESS GAS-FIELD REJECTED

112222123INCRESINCININCCBRNRESBRNINDBRNCMLTVEHGSHVVEHGOFFHWYHVVEHDOFFHDDLLOCPAA3
     B     EB   EB  EB     EB     EB   EB      EB     EB     EB     EB   EB   EB
      *** CCENETR 021 ERROR - COLUMN 10 - INVALID RESIDENTIAL ON SITE INCINERATION-FIELD REJECTED
      *** CCENETR 022 ERROR - COLUMN 16 - INVALID INDUSTRIAL ON SITE INCINERATION-FIELD REJECTED
      *** CCENETR 023 ERROR - COLUMN 21 - INVALID COMM/INST ON SITE INCINERATION-FIELD REJECTED
      *** CCENETR 024 ERROR - COLUMN 25 - INVALID RESIDENTIAL OPEN BURNING-FIELD REJECTED
      *** CCENETR 025 ERROR - COLUMN 31 - INVALID INDUSTRIAL OPEN BURNING-FIELD REJECTED
      *** CCENETR 026 ERROR - COLUMN 37 - INVALID COMM/INST OPEN BURNING-FIELD REJECTED
      *** CCENETR 045 ERROR - COLUMN 72 - INVALID RAIL LOCOMOTIVE-FIELD REJECTED
      *** CCENETR 039 ERROR - COLUMN 55 - INVALID OFF HIWAY GAS-FIELD REJECTED
      *** CCENETR 044 ERROR - COLUMN 67 - INVALID OFF HIWAY DIESEL-FIELD REJECTED
      *** CCENETR 065 ERROR - COLUMN 42 - INVALID LIGHT VEHICLE GAS-FIELD REJECTED
      *** CCENETR 066 ERROR - COLUMN 49 - INVALID HEAVY VEHICLE GAS-FIELD REJECTED
      *** CCENETR 067 ERROR - COLUMN 61 - INVALID HEAVY VEHICLE DIESEL-FIELD REJECTED
      *** CCENETR 068 ERROR - COLUMN 77 - INVALID POPULATION CODE-FIELD REJECTED

112222123AIRMAIRCIVAIRCMVESCVESDVESROEVPGEVPSOLEVPGMLIMACCRURALRSUBURBURBANRDAA4
     B EB      EB     EB  EB  EB    EB  EB     EB   EB      EB     EB    EB     E
      *** CCENETR 046 ERROR - COLUMN 10 - INVALID MILITARY AIRCRAFT LTO-FIELD REJECTED
      *** CCENETR 047 ERROR - COLUMN 14 - INVALID CIVIL AIRCRAFT LTO-FIELD REJECTED
      *** CCENETR 048 ERROR - COLUMN 20 - INVALID COMMERCIAL AIRCRAFT LTO-FIELD REJECTED
      *** CCENETR 049 ERROR - COLUMN 25 - INVALID COAL VESSELS-FIELD REJECTED
      *** CCENETR 050 ERROR - COLUMN 29 - INVALID DIESEL OIL VESSELS-FIELD REJECTED
      *** CCENETR 051 ERROR - COLUMN 33 - INVALID RESIDUAL OIL VESSELS-FIELD REJECTED
```

(Page 2 of 4)

Figure AST13-2 - continued. Sample Output

```
                         NEDS TO EIS/AS CONVERSION-EDIT PROGRAM DIAGNOSTIC REPORT                         PAGE    3

      *** CCENETR 052 ERROR - COLUMN 38 - INVALID GASOLINE VESSELS-FIELD REJECTED
      *** CCENETR 053 ERROR - COLUMN 42 - INVALID SOLVENT PURCHASED-FIELD REJECTED
      *** CCENETR 054 ERROR - COLUMN 48 - INVALID GASOLINE MARKETED-FIELD REJECTED
      *** CCENETR 069 ERROR - COLUMN 53 - INVALID LIMITED ACCESS ROADS-MVM-FIELD REJECTED
      *** CCENETR 070 ERROR - COLUMN 59 - INVALID RURAL ROADS-MVM-FIELD REJECTED
      *** CCENETR 071 ERROR - COLUMN 65 - INVALID SUBURBAN ROADS-MVM-FIELD REJECTED
      *** CCENETR 072 ERROR - COLUMN 71 - INVALID URBAN ROADS-MVM-FIELD REJECTED

112222123DIRTRDSDRTASCONACRWNDERLANDTWLDFIRET/AMANBRNT/AAGRBRNT/AORHIDAYFIRESAA5
   B     EB   EB    EB   EB   EB      EB EB    EB EB     EB EB  EB EB   E
      *** CCENETR 055 ERROR - COLUMN 10 - INVALID DIRT ROAD TRAVELED-FIELD REJECTED
      *** CCENETR 056 ERROR - COLUMN 17 - INVALID DIRT AIR STRIPS-FIELD REJECTED
      *** CCENETR 057 ERROR - COLUMN 22 - INVALID CONSTRUCTION ACRES-FIELD REJECTED
      *** CCENETR 058 ERROR - COLUMN 28 - INVALID MISC WIND EROSION-FIELD REJECTED
      *** CCENETR 059 ERROR - COLUMN 33 - INVALID LAND TILLING-FIELD REJECTED
      *** CCENETR 064 ERROR - COLUMN 73 - INVALID STRUCTURE FIRES-FIELD REJECTED
      *** CCENETR 060 ERROR - COLUMN 38 - INVALID FOREST WILDFIRES-FIELD REJECTED
      *** CCENETR 027 ERROR - COLUMN 45 - INVALID FOREST WILDFIRE TONS/ACRE BURNED-FIELD REJECTED
      *** CCENETR 061 ERROR - COLUMN 48 - INVALID MANAGED/PRESCRIBED BURNING-FIELD REJECTED
      *** CCENETR 028 ERROR - COLUMN 54 - INVALID MANAGED BURNING TONS/ACRE BURNED-FIELD REJECTED
      *** CCENETR 062 ERROR - COLUMN 57 - INVALID AGRICULTURAL FIELD BURNING-FIELD REJECTED
      *** CCENETR 029 ERROR - COLUMN 63 - INVALID AGR FIELD BURN TONS/ACRE BURNED-FIELD REJECTED
      *** CCENETR 063 ERROR - COLUMN 66 - INVALID FROST CONTROL (ORCHARD HEATERS)-FIELD REJECTED
      *** CCENETR 030 ERROR - COLUMN 70 - INVALID FROST CONTROL DAYS/FIRED-FIELD REJECTED

11222212380SCISPESTSO2ESNOXESTHCESTICOESTIM                                     AA7
         BEB    EB   EB    EB    EB    E
      *** CCENETR 038 ERROR - COLUMN 12 - INVALID SOURCE-CODE-TRANSACTION REJECTED
      *** CCENETR 033 ERROR - COLUMN 14 - INVALID SOURCE TSP EMISSION ESTIMATE-FIELD REJECTED
      *** CCENETR 034 ERROR - COLUMN 20 - INVALID SOURCE SO2 EMISSION ESTIMATE-FIELD REJECTED
      *** CCENETR 035 ERROR - COLUMN 25 - INVALID SOURCE NOX EMISSION ESTIMATE-FIELD REJECTED
      *** CCENETR 036 ERROR - COLUMN 31 - INVALID SOURCE HC EMISSION ESTIMATE-FIELD REJECTED
      *** CCENETR 037 ERROR - COLUMN 37 - INVALID SOURCE CO EMISSION ESTIMATE-FIELD REJECTED
```

(Page 3 of 4)

Figure AST13-2 - continued. Sample Output

```
                     NEDS TO EIS/AS CONVERSION-EDIT PROGRAM DIAGNOSTIC REPORT                         PAGE     4

NUMBER OF NEDS TRANSCTIONS READ:                                      7
NUMBER OF ERRORS DETECTED:                                           84
NUMBER OF ABORTS DETECTED:                                            0
NUMBER OF CONDITIONALS DETECTED:                                      2
NUMBER OF INTERNAL TRANSACTIONS WRITTEN:                             99
```

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Figure AST13-2 - continued. Sample Output

## EIS/AS Test 14 - Ad Hoc

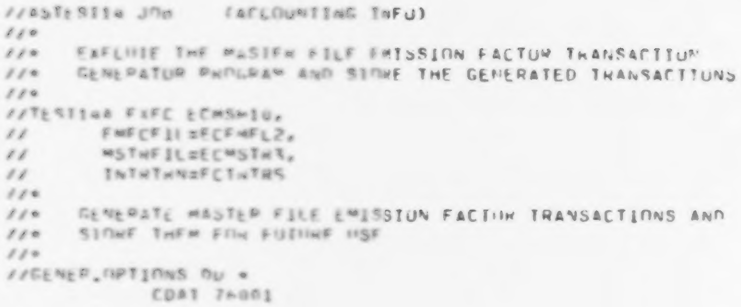
### Execute the Master File Emission Factor Transaction Generator Program and Store the Generated Transactions

In this test run, master file emission factor transactions are generated using the cataloged procedure ECMSM10 which executes CMSEFGN (EC0080), the master file emission factor transaction generator program.

The master file emission factor transactions generated by CMSEFGN (EC0080) are stored for future use. See EIS/AS Test 9 for a discussion of this program.

The run stream for this test run contains the JCL needed to generate the transactions. Substitutable parameters are used to supply the names of the input emission factor file and master file, and the output transaction file. The names of these files are ECEMFL2 (created in Test 11), ECMSTR3 (created in Test 5), and ECINTR5, respectively. The DD (data definition) information for the option card file is also supplied in the run stream. This run stream is shown in Figure AST14-1.

The FLAGW option field of the option card is blank, therefore, the default of NOFLAGW is in effect and the warning messages will not be printed. A category date of 76001 (Julian date expressed as YYDDD, where YY is the year and DDD is the day of the year) is supplied on the option card. This date controls the generation of transactions by creating category-2 transactions only when the date of an emission factor file category record is greater than the category date specified on the option card. No category-5 transactions are created because a pollutant date is not specified on the option card. Sample output produced by this run stream is shown in Figure AST14-2.



```
//ASTEST14 JOB     (ACCOUNTING INFO)
//*
//*    EXECUTE THE MASTER FILE EMISSION FACTOR TRANSACTION
//*    GENERATOR PROGRAM AND STORE THE GENERATED TRANSACTIONS
//*
//TEST14A EXEC ECMSM10,
//        EMFCFIL=ECFMFL2,
//        MSTRFIL=ECMSTR3,
//        INTRTRN=ECTRTRS
//*
//*    GENERATE MASTER FILE EMISSION FACTOR TRANSACTIONS AND
//*    STORE THEM FOR FUTURE USE
//*
//GENER.OPTIONS DD *
            CDAT 76001
```

Figure AST14-1.  Run Stream

```
                    MASTER FILE EMISSION FACTOR TRANSACTION GENERATOR PROGRAM                    PAGE    1

PROGRAM NAME: CMSEFGN (EC0080)
REVISION LEVEL:  1-00
LAST UPDATE #:  A-1
DATE INCORPORATED:  FEBRUARY 1, 1980


OPTIONS IN EFFECT:  NOFLAGW      CDAT 76001


                                      DATE: CATEGORY 76/001  POLLUTANT  N/A


     *** CMSEFGN 009 CONDITIONAL - EMISSION FACTOR FILE CONTAINS FEDERAL CATEGORY RECORDS FOR CATEGORIES OTHER THAN 1-64


NUMBER OF MASTER FILE RECORDS READ:                 420
NUMBER OF EMISSION FACTOR RECORDS READ:             683
NUMBER OF CATEGORY-2 TRANSACTIONS CREATED:           20
NUMBER OF CATEGORY-5 TRANSACTIONS CREATED:            0

NUMBER OF WARNING MESSAGES:                       3,774
NUMBER OF CONDITIONAL MESSAGES:                       1
NUMBER OF ERROR MESSAGES:                             0
NUMBER OF ABORT MESSAGES:                             0
NUMBER OF DISASTER MESSAGES:                          0
```

Figure AST14-2. Sample Output

## EIS/AS Test 15 - Ad Hoc

### Exercise All Options of the Master File Internal Transaction Emission Factor Insertion Program

In this test run, all options of CMSEFIN (EC0060) are exercised using the cataloged procedure ECMST10 which executes CSRINTR (EC0050), the master file internal transaction sort program; and CMSEFIN (EC0060), the master file internal transaction emission factor insertion program.

The internal transactions generated in Test 14 are sorted by CSRINTR (EC0050) into the sequence required by CMSEFIN (EC0060). See Test 2 for a discussion of these programs.

The run stream for this test run contains the JCL needed to insert emission factors from the emission factor file into the internal transactions created in Test 14. This run stream is shown in Figure AST15-1.

Substitutable parameters are used to supply the names of the input emission factor file and internal transaction file, and the output internal transaction file with the inserted emission factors. The names of these files are ECEMFL2 (created in Test 11), ECINTR5, and ECINTR6, respectively. The DD (data definition) information for the option card file of CMSEFIN (EC0060) is also supplied.

The FLAGW option is specified on the option card so that all warning messages will be printed in the diagnostic report output from CMSEFIN (EC0060). All available fields are selected for insertion or overriding: nitrogen content, sulfur content, ash content, emission factor, confidence level, and pollutant-specific data. Also, a category date and a pollutant date are specified to control the insert/override action. Sample output produced by this run stream is shown in Figure AST15-2.

```
//ASTEST15 JOB    (ACCOUNTING INFO)
//*
//*   EXERCISE ALL OPTIONS OF THE MASTER FILE INTERNAL
//*   TRANSACTION EMISSION FACTOR INSERTION PROGRAM
//*
//TEST15A EXEC ECMS110,
//        FMFCFIL=ECFMFL2,
//        OLDINTR=ECINTR5,
//        NEWINTR=ECINTR6
//*
//*   SPECIFY 'FLAGN' ON THE OPTION CARD:
//*   SELECT ALL AVAILABLE FIELDS FOR INSERTION
//*   OR OVERRIDING:  NITROGEN CONTENT, SULFUR
//*   CONTENT, ASH CONTENT, EMISSION FACTOR,
//*   CONFIDENCE LEVEL, AND POLLUTANT-SPECIFIC
//*   DATA:  SPECIFY A CATEGORY DATE AND A
//*   POLLUTANT DATE TO CONTROL THE INSERT/
//*   OVERRIDE ACTION
//*
//INSERT.OPTIONS DD *
FLAGN   NIT IO SUL IO ASH IO EMISSION IO CONF IO SPEC IO CDAT 75001 PDAT 75001
```

Figure AST15-1.  Run Stream

```
                   EIS/AS MASTER FILE INTERNAL TRANSACTION SORT PROGRAM  -  DIAGNOSTIC REPORT                PAGE    1

PROGRAM NAME: CSRINTR (EC0050)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980


NUMBER OF INPUT TRANSACTIONS READ:                               20
NUMBER OF TRANSACTIONS WRITTEN:                                  21
```

(Page 1 of 2)

Figure AST15-2.  Sample Output

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```
                                    EMISSION FACTOR INSERTION PROGRAM                                               PAGE    1

PROGRAM NAME: CMSEFIN (EC0060)
REVISION LEVEL:  1-00
LAST UPDATE #:  A-1
DATE INCORPORATED:  FEBRUARY 1, 1980


OPTIONS IN EFFECT:  FLAGR

          FIELDS SELECTED FOR INSERTIONS:  NIT  SUL  ASH  EMISSION  CONF  SPEC  CDAT 75001 PDAT 75001

          FIELDS TO BE OVERRIDDEN:  NIT  SUL  ASH  EMISSION  CONF  SPEC


NITROGEN I  C  SULFUR I  L  ASH I  L  EMISSION FACTOR I  U  CONF LEVEL I  F  SPEC DATA I  C    DATE: CATEGORY 75001  POLLUTANT 75001


          *** CMSEFIN 009 CONDITIONAL - EMISSION FACTOR FILE CONTAINS FEDERAL CATEGORY RECORDS FOR CATEGORIES OTHER THAN 1-64


NUMBER OF INPUT TRANSACTIONS:                       21
NUMBER OF EMISSION FACTOR RECORDS READ:            676
NUMBER OF STATE AND LOCAL INSERTIONS MADE:          20
NUMBER OF FEDERAL INSERTIONS MADE:                   0
NUMBER OF OUTPUT TRANSACTIONS:                      21
```

(Page 2 of 2)

Figure AST15-2 - continued. Sample Output

## EIS/AS Test 16 - Ad Hoc

### Execute a COBOL Retrieval and Produce a Formatted Dump of the Answer File

In this test run, a COBOL retrieval is executed using the cataloged procedure ECRTM30 which executes CRTLNGP (EC0090), the retrieval language processor program; the COBOL compiler; the linkage editor; and CRTGENR (EC0100), the generated retrieval program. The answer file produced by this procedure is listed in a formatted dump by using the cataloged procedure ECRPM30 which executes CRPDUMP (EC0140), the master file formatted dump program.

The user-supplied COBOL statements are combined with CRTSKEL, the retrieval program, by CRTLNGP (EC0090) to form the generated retrieval program CRTGENR (EC0100). The generated program is then compiled, link-edited, and executed. An EIS/AS master file is input to CRTGENR (EC0100) which selects records according to the user-supplied COBOL statements and creates an answer file. This answer file is passed to CRPDUMP (EC0140) to be listed in a formatted dump. Refer to Test 7 for a discussion of CRTLNGP (EC0090) and CRTGENR (EC0100); and refer to Test 4 for a discussion of CRPDUMP (EC0140).

The run stream for this test run contains the JCL needed to execute the retrieval package and produce a formatted dump of the answer file. The purpose of this test run is to retrieve all master file data that has not been submitted to NEDS. All data flags in each master file record are checked for 'S'. If a flag does not contain 'S', that record is written to the answer file. This run stream is shown in Figure AST16-1. Sample output produced by this run stream is shown in Figure AST16-2.

Substitutable parameters are used to supply the names of the master file input to CRTGENR (EC0100) and the answer file output from CRTGENR (EC0100). A substitutable parameter is also used to supply the name of the answer file input to CRPDUMP (EC0140). The names of the master file and answer file are ECMSTR7 (created in Test 9) and ECANSR3, respectively. The DD (data definition) information for the COBOL statements input to CRTLNGP (EC0090) and the option card file input to CRPDUMP (EC0140) are also supplied.

The user-supplied COBOL statements must conform to ANS COBOL format. The COBOL statements in this test run are included in the run stream.

No option card is supplied for CRPDUMP (EC0140), therefore, the following defaults are assumed by the program: 55 printed lines per page, no records are skipped, and all records will be dumped.

```
//ASTEST16 JOB    (ACCOUNTING INFO)
//*
//*   EXECUTE A COBOL RETRIEVAL AND LIST THE ANSWER FILE USING THE
//*   MASTER FILE FORMATTED DUMP PROGRAM
//*
//TEST16A EXEC ECRTM30,
//      MSTRFIL=ECMSTR7,
//      ANSRFIL=ECANSR3
//*
//*   GENERATE AND EXECUTE A MASTER FILE RETRIEVAL PROGRAM
//*   THE USER SPECIFICATIONS FOR WHICH ARE PROVIDED IN
//*   IN-STREAM COBOL STATEMENTS
//*
//GENER.INPUT DD *
*$SELECT USER
           IF RECORD-IS-DESCRIPTION
              PERFORM USER-DESC-PARA THRU USER-DESC-PARA-END
           ELSE
              IF RECORD-IS-CATEGORY
                 PERFORM USER-CAT-PARA THRU USER-CAT-PARA-END
              ELSE
                 PERFORM USER-COMM-PARA THRU USER-COMM-PARA-END.
           GO TO USER-QUALIFICATION-END.
         USER-DESC-PARA.
           IF NEDS-A1-FLAG IS NOT EQUAL TO 'S' OR
              NEDS-A3-FLAG IS NOT EQUAL TO 'S' OR
              NEDS-A4-FLAG IS NOT EQUAL TO 'S' OR
              FIS-FLAG-CARD-0-1 IS NOT EQUAL TO 'S' OR
              FIS-FLAG-CARD-0-2 IS NOT EQUAL TO 'S' OR
              FIS-FLAG-CARD-0-3 IS NOT EQUAL TO 'S' OR
              FIS-FLAG-CARD-0-4 IS NOT EQUAL TO 'S' OR
              FIS-FLAG-CARD-0-5 IS NOT EQUAL TO 'S' OR
              FIS-FLAG-CARD-0-6 IS NOT EQUAL TO 'S'
              PERFORM RECORD-QUAL-PARA THRU RECORD-QUAL-PARA-END
           ELSE
              MOVE BINARY-1 TO DESC-SUB
              PERFORM USER-DESC-REPEAT THRU USER-DESC-REPEAT-END
                 UNTIL DESC-SUB IS GREATER THAN DESC-NBR-POLL.
         USER-DESC-PARA-END.
           EXIT.
         USER-DESC-REPEAT.
           IF FIS-FLAG-CARD-0-7 (DESC-SUB) IS NOT EQUAL TO 'S'
              PERFORM RECORD-QUAL-PARA THRU RECORD-QUAL-PARA-END
              MOVE DESC-NBR-POLL TO DESC-SUB.
           ADD BINARY-1 TO DESC-SUB.
         USER-DESC-REPEAT-END.
           EXIT.
         USER-CAT-PARA.
           IF NEDS-FLAG IS NOT EQUAL TO 'S' OR
              NEDS-A7-FLAG IS NOT EQUAL TO 'S' OR
              FIS-FLAG-CARD-1-1 IS NOT EQUAL TO 'S' OR
              FIS-FLAG-CARD-1-2 IS NOT EQUAL TO 'S' OR
              FIS-FLAG-CARD-1-3 IS NOT EQUAL TO 'S' OR
              FIS-FLAG-CARD-1-4 IS NOT EQUAL TO 'S'
              PERFORM RECORD-QUAL-PARA THRU RECORD-QUAL-PARA-END
           ELSE
              MOVE BINARY-1 TO CAT-SUB
              PERFORM USER-CAT-REPEAT THRU USER-CAT-REPEAT-END
```

(Page 1 of 2)

Figure AST16-1. Run Stream

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```
                UNTIL CAT-SUB IS GREATER THAN CAT-NBR-POLL.
        USER-CAT-PARA-END.
          EXIT.
        USER-CAT-REPEAT.
          IF ETS-FLAG-CARD-1-5 (CAT-SUB) IS NOT EQUAL TO 'S'
             PERFORM RECORD-QUAL-PARA THRU RECORD-QUAL-PARA-END
             MOVE CAT-NBR-POLL TO CAT-SUB.
          ADD BINARY-1 TO CAT-SUB.
        USER-CAT-REPEAT-END.
          EXIT.
        USER-COMM-PARA.
          IF NEDS-A6-FLAG IS EQUAL TO SPACE AND
             (ETS-FLAG-CARD-2-1 IS NOT EQUAL TO 'S' OR
              ETS-FLAG-CARD-2-2 IS NOT EQUAL TO 'S')
             PERFORM RECORD-QUAL-PARA THRU RECORD-QUAL-PARA-END
          ELSE
             IF NEDS-A5-FLAG IS NOT EQUAL TO 'S'
                PERFORM RECORD-QUAL-PARA THRU RECORD-QUAL-PARA-END.
        USER-COMM-PARA-END.
          EXIT.
$$END
//TEST16B EXEC ECRPM30,
//      MSTRFIL=ECANSW3
//*
//*   DUMP THE ANSWER FILE FROM STEP A
//*
//DUMP.OPTIONS DD *
```

(Page 2 of 2)

Figure AST16-1 - continued. Run Stream

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```
                     EIS/AS RETRIEVAL LANGUAGE PROCESSOR PROGRAM - DIAGNOSTIC REPORT                    PAGE    1

PROGRAM NAME: CRTLNGP (EC0090)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980


INPUT (CONTROL CARDS):
$$SELECT USER
           IF RECORD-IS-DESCRIPTION
              PERFORM USER-DESC-PARA THRU USER-DESC-PARA-END
           ELSE
              IF RECORD-IS-CATEGORY
                 PERFORM USER-CAT-PARA THRU USER-CAT-PARA-END
              ELSE
                 PERFORM USER-COMM-PARA THRU USER-COMM-PARA-END.
           GO TO USER-QUALIFICATION-END.
         USER-DESC-PARA.
           IF NEDS-A1-FLAG IS NOT EQUAL TO 'S' OR
              NEDS-A3-FLAG IS NOT EQUAL TO 'S' OR
              NEDS-A4-FLAG IS NOT EQUAL TO 'S' OR
              EIS-FLAG-CARD-0-1 IS NOT EQUAL TO 'S' OR
              EIS-FLAG-CARD-0-2 IS NOT EQUAL TO 'S' OR
              EIS-FLAG-CARD-0-3 IS NOT EQUAL TO 'S' OR
              EIS-FLAG-CARD-0-4 IS NOT EQUAL TO 'S' OR
              EIS-FLAG-CARD-0-5 IS NOT EQUAL TO 'S' OR
              EIS-FLAG-CARD-0-6 IS NOT EQUAL TO 'S'
              PERFORM RECORD-QUAL-PARA THRU RECORD-QUAL-PARA-END
           ELSE
              MOVE BINARY-1 TO DESC-SUB
              PERFORM USER-DESC-REPEAT THRU USER-DESC-REPEAT-END
                 UNTIL DESC-SUB IS GREATER THAN DESC-NBR-POLL.
         USER-DESC-PARA-END.
           EXIT.
         USER-DESC-REPEAT.
           IF EIS-FLAG-CARD-0-7 (DESC-SUB) IS NOT EQUAL TO 'S'
              PERFORM RECORD-QUAL-PARA THRU RECORD-QUAL-PARA-END
              MOVE DESC-NBR-POLL TO DESC-SUB.
           ADD BINARY-1 TO DESC-SUB.
         USER-DESC-REPEAT-END.
           EXIT.
         USER-CAT-PARA.
           IF NEDS-FLAG IS NOT EQUAL TO 'S' OR
              NEDS-A7-FLAG IS NOT EQUAL TO 'S' OR
              EIS-FLAG-CARD-1-1 IS NOT EQUAL TO 'S' OR
              EIS-FLAG-CARD-1-2 IS NOT EQUAL TO 'S' OR
              EIS-FLAG-CARD-1-3 IS NOT EQUAL TO 'S' OR
              EIS-FLAG-CARD-1-4 IS NOT EQUAL TO 'S'
              PERFORM RECORD-QUAL-PARA THRU RECORD-QUAL-PARA-END
           ELSE
```

(Page 1 of 6)

Figure AST16-2. Sample Output

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```
                    EIS/AS RETRIEVAL LANGUAGE PROCESSOR PROGRAM - DIAGNOSTIC REPORT                    PAGE     2

        MOVE BINARY-1 TO CAT-SUB
        PERFORM USER-CAT-REPEAT THRU USER-CAT-REPEAT-END
           UNTIL CAT-SUB IS GREATER THAN CAT-ARR-POLL.
    USER-CAT-PARA-END.
      EXIT.
    USER-CAT-REPEAT.
      IF EIS-FLAG-CARD-1-6 (CAT-SUB) IS NOT EQUAL TO 'S'
         PERFORM RECORD-QUAL-PARA THRU RECORD-QUAL-PARA-END
         MOVE CAT-ARR-POLL TO CAT-SUB.
      ADD BINARY-1 TO CAT-SUB.
    USER-CAT-REPEAT-END.
      EXIT.
    USER-COMM-PARA.
      IF RECS-AA-FLAG IS EQUAL TO SPACE AND
         (EIS-FLAG-CARD-2-1 IS NOT EQUAL TO 'S' OR
          EIS-FLAG-CARD-2-2 IS NOT EQUAL TO 'S')
         PERFORM RECORD-QUAL-PARA THRU RECORD-QUAL-PARA-END
      ELSE
         IF RECS-AB-FLAG IS NOT EQUAL TO 'S'
            PERFORM RECORD-QUAL-PARA THRU RECORD-QUAL-PARA-END.
    USER-COMM-PARA-END.
      EXIT.
$$END

NUMBER OF CONTROL CARDS READ:                                   65
NUMBER OF RETRIEVAL SKELETON RECORDS READ:                     837
NUMBER OF RETRIEVAL SOURCE RECORDS WRITTEN:                    958
NUMBER OF CONDITIONAL MESSAGES:                                  0
NUMBER OF ABORT MESSAGES:                                        0

PROGRAM NAME: CHILAGP (ICONVE)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980
```

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Figure AST16-2 - continued. Sample Output

```
                       FIS/AS GENERATED RETRIEVAL PROGRAM - DIAGNOSTIC REPORT                         PAGE     1

PROGRAM NAME: CATGENR (EC010R)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980


NUMBER OF MASTER FILE RECORDS READ:        371
NUMBER OF MASTER FILE RECORDS WRITTEN:     288
NUMBER OF CONDITIONAL MESSAGES:              0
NUMBER OF ABORT MESSAGES:                    0
```

(Page 3 of 6)

Figure AST16-2 - continued. Sample Output

```
                         EIS/AS MASTER FILE FORMATTED DUMP PROGRAM  -  DIAGNOSTIC REPORT                            PAGE

PROGRAM NAME: CRPDUMP (EC0140)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980

OPTIONS IN EFFECT:  55 LINES PER PAGE;        0 RECORDS SKIPPED;      ALL RECORDS TO BE DUMPED

*** CRPDUMP 003 CONDITITONAL - NO VALID LINE SPECIFICATION - DEFAULT OF 55 ASSUMED
*** CRPDUMP 004 CONDITITONAL - NO VALID VALUE SPECIFIED FOR NUMBER OF RECORDS TO BE SKIPPED - DUMP STARTS AT FIRST RECORD
*** CRPDUMP 005 CONDITITONAL - NO VALID VALUE SPECIFIED FOR NUMBER OF RECORDS TO BE DUMPED - ENTIRE FILE DUMPED

NUMBER OF DESCRIPTION RECORDS DUMPED:               0
NUMBER OF CATEGORY RECORDS DUMPED:                284
NUMBER OF COMMENT RECORDS DUMPED:                   0
TOTAL NUMBER OF RECORDS READ:                     284
```

(Page 4 of 6)

Figure AST16-2 - continued.  Sample Output

```
                                             EIS/AS MASTER FILE FORMATTED DUMP                                          PAGE     1

      STATE=06    COUNTY=2238    GEOGR/SUBALLOC/#=00000    CATEGRY/#=023    DISAGGR/#=00    RECORD/TYPE/(KEY)=1    LINE/#=000    BATCH=0
AQCR=067  REC/TYPE=CA  CATEGRY/DESC=COMM-INST ON-SITE INCINER  YR/OF/INFO=79  PROSS/RATE=000002350  CATEGRY/ADJ=            UNITS/CD=
UNITS/CD/DESC=                  UNIFRM/THRUPT=Y  MNTHLY/THRUPT/%: (JAN=08,FEB=08,MAR=09,APR=08,MAY=08,JUN=09,JUL=08,AUG=08,SEP=09,OCT=08
NOV=08,DEC=09)  HRS/PER/DAY=     DAYS/PER/WK=    WKS/PER/YR=     THRUPT/RATIO=       MAX/HRLY/THRUPT=                 DATA/CONFIDENCE/RATING=0
NITRG/%=        SULF/%=     ASH/%=      HEAT/CONT=          UNIFRM/HRLY/THRUPT=    HRLY/THRUPT/%: (00=  ,  ,  ,03=  ,  ,  ,06=  ,  ,  ,09=
  ,  ,12=  ,  ,  ,15=  ,  ,  ,18=  ,  ,  ,21=  ,  ,  )  NEDS/A7/COMM=MASTER FILE TEST DATA                 INFO/SOURCE/CODE=S
INFO/SRCE/NARR=                            EIS/FLG/1=S  EIS/FLG/2=S  EIS/FLG/3=S  EIS/FLG/4=S  NEDS/FLG=S  NEDS/A7/FLG=S  #/POLL=06
POLL/ID EMIS/FACTR EF/CNF/RTNG EF/SRC/CD EF/ORIG POLL/SPC/DATA NEDS/A7/EMIS    POLL/NAME     EIS/FLG/5 EMIS/EST CONF/RTNG MX/HRLY/EMS
11101    0000008000       0                F                                  SUSPENDED PART.      C       0000000       0
42101    0000008000       0                F                                  SUSPENDED PART.      C       0000000       0
42401    0000002500       0                F                                  SULFUR DIOXIDE       C       0000000       0
42602    0000003000       0                F                                     N  OXIDES         C       0000000       0
43101                     0                F                                  HYDROCARBONS         S       0000000       0
42269                     0                L                                  TOTAL  SULFUR        S       0000000       0

---------------------------------------------------------------------------------------------------------------------------------------------

      STATE=06    COUNTY=2238    GEOGR/SUBALLOC/#=00000    CATEGRY/#=047    DISAGGR/#=00    RECORD/TYPE/(KEY)=1    LINE/#=000    BATCH=0
AQCR=067  REC/TYPE=CA  CATEGRY/DESC=CIVIL AIRCRAFT LTO'S          YR/OF/INFO=79  PROSS/RATE=000005005  CATEGRY/ADJ=            UNITS/CD=
UNITS/CD/DESC=                  UNIFRM/THRUPT=Y  MNTHLY/THRUPT/%: (JAN=08,FEB=08,MAR=09,APR=08,MAY=08,JUN=09,JUL=08,AUG=08,SEP=09,OCT=08
NOV=08,DEC=09)  HRS/PER/DAY=     DAYS/PER/WK=    WKS/PER/YR=     THRUPT/RATIO=       MAX/HRLY/THRUPT=                 DATA/CONFIDENCE/RATING=0
NITRG/%=        SULF/%=     ASH/%=      HEAT/CONT=          UNIFRM/HRLY/THRUPT=    HRLY/THRUPT/%: (00=  ,  ,  ,03=  ,  ,  ,06=  ,  ,  ,09=
  ,  ,12=  ,  ,  ,15=  ,  ,  ,18=  ,  ,  .21=  ,  ,  )  NEDS/A7/COMM=MASTER FILE TEST DATA                 INFO/SOURCE/CODE=S
INFO/SRCE/NARR=                            EIS/FLG/1=S  EIS/FLG/2=S  EIS/FLG/3=S  EIS/FLG/4=S  NEDS/FLG=S  NEDS/A7/FLG=S  #/POLL=05
POLL/ID EMIS/FACTR EF/CNF/RTNG EF/SRC/CD EF/ORIG POLL/SPC/DATA NEDS/A7/EMIS    POLL/NAME     EIS/FLG/5 EMIS/EST CONF/RTNG MX/HRLY/EMS
11101    0000000020       0                F                                  SUSPENDED PART.      C       0000000       0
42101    0000000020       0                F                                  SUSPENDED PART.      C       0000000       0
42401    0000000010       0                F                                  SULFUR DIOXIDE       C       0000000       0
42602    0000000028       0                F                                     N  OXIDES         C       0000000       0
43101                     0                F                                  HYDROCARBONS         S       0000000       0

---------------------------------------------------------------------------------------------------------------------------------------------

      STATE=06    COUNTY=2238    GEOGR/SUBALLOC/#=00000    CATEGRY/#=060    DISAGGR/#=00    RECORD/TYPE/(KEY)=1    LINE/#=000    BATCH=0
AQCR=067  REC/TYPE=CA  CATEGRY/DESC=FOREST WILD FIRES              YR/OF/INFO=79  PROSS/RATE=            CATEGRY/ADJ=0000900  UNITS/CD=
UNITS/CD/DESC=                  UNIFRM/THRUPT=Y  MNTHLY/THRUPT/%: (JAN=08,FEB=08,MAR=09,APR=08,MAY=08,JUN=09,JUL=08,AUG=08,SEP=09,OCT=08
NOV=08,DEC=09)  HRS/PER/DAY=     DAYS/PER/WK=    WKS/PER/YR=     THRUPT/RATIO=       MAX/HRLY/THRUPT=                 DATA/CONFIDENCE/RATING=0
NITRG/%=        SULF/%=     ASH/%=      HEAT/CONT=          UNIFRM/HRLY/THRUPT=    HRLY/THRUPT/%: (00=  ,  ,  ,03=  ,  ,  ,06=  ,  ,  ,09=
  ,  ,12=  ,  ,  ,15=  ,  ,  ,18=  ,  ,  ,21=  ,  ,  )  NEDS/A7/COMM=MASTER FILE TEST DATA                 INFO/SOURCE/CODE=F
INFO/SRCE/NARR=                            EIS/FLG/1=S  EIS/FLG/2=S  EIS/FLG/3=S  EIS/FLG/4=S  NEDS/FLG=S  NEDS/A7/FLG=S  #/POLL=06
POLL/ID EMIS/FACTR EF/CNF/RTNG EF/SRC/CD EF/ORIG POLL/SPC/DATA NEDS/A7/EMIS    POLL/NAME     EIS/FLG/5 EMIS/EST CONF/RTNG MX/HRLY/EMS
11101    0000017000       0                F                                  SUSPENDED PART.      C       0000000       0
42101    0000017000       0                F                                  SUSPENDED PART.      C       0000000       0
42401    0000000150       0                F                                  SULFUR DIOXIDE       C       0000000       0
42602    0000004000       0                F                                     N  OXIDES         C       0000000       0
43101                     0                F                                  HYDROCARBONS         S       0000000       0
42269                     0                L                                  TOTAL  SULFUR        S       0000000       0
```

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Figure AST16-2 - continued. Sample Output

```
                                                  FIS/AS MASTER FILE FORMATTED DUMP                                          PAGE    95

      STATE=42    COUNTY=2440    REGNR/SUBALLOC/#=00000    CATEGRY/#=040    EISAGCN/#=00    RECORD/TYPE/(KEY)=1    LINE/#=000    MATCH=1
AQCR=167  REC/TYPE=CA  CATEGRY/DESC=FOREST WILD FIRES          YR/OF/INFO=    PROSS/RATE=000000096  CATEGRY/ADJ=0000009  UNITS/CD=
UNITS/CD/DESC=                  UNIFRM/THRUPT=   MNTHLY/THRUPT/%: (JAN=  ,FEB=  ,MAR=  ,APR=  ,MAY=  ,JUN=  ,JUL=  ,AUG=  ,SEP=  ,OCT=
NOV=  ,DEC=  )  HRS/PER/DAY=     DAYS/PER/WK=   WKS/PER/YR=     THRUPT/RATIO=       MAX/HRLY/THRUPT=               DATA/CONFIDENCE/RATING=
NITRG/%=       SULF/%=    ASH/%=      HEAT/CONT=        UNIFRM/HRLY/THRUPT=    HRLY/THRUPT/%: (00=  ,  ,  ,03=  ,  ,  ,06=  ,  ,  ,09=
  ,  ,12=  ,  ,  ,15=  ,  ,  ,18=  ,  ,  ,21=  ,  ,  )  NEDS/A7/COMM=                                 INFO/SOURCE/CODE=
INFO/SRCE/NAME=                            EIS/FLG/1=3  EIS/FLG/2=S  EIS/FLG/3=S  EIS/FLG/4=S  NEDS/FLG=S  NEDS/A7/FLG=S  #/POLL=05
POLL/ID EMIS/FACTR EF/CNF/RTNG EF/SRC/CD EF/CHNG POLL/SPC/DATA NEDS/A7/EMIS    POLL/NAME     EIS/FLG/5 EMIS/EST CONF/RTNG MX/HRLY/EMS
11101   0000017000      0                   F                                SUSPENDED PART.     C      0000007      0
42101   0000017000      0                   F                                SUSPENDED PART.     C      0000007      0
42401   0000000150      0                   F                                SULFUR DIOXIDE      C      0000000      0
42602   0000004000      0                   F                                   N  OXIDES        C      0000002      0
43101                                       F     0170000SUS                 HYDROCARBONS        S      0000000      0

-------------------------------------------------------------------------------------------------------------------------------------

      STATE=42    COUNTY=2440    REGNR/SUBALLOC/#=00000    CATEGRY/#=041    EISAGCN/#=00    RECORD/TYPE/(KEY)=1    LINE/#=000    MATCH=0
AQCR=167  REC/TYPE=CA  CATEGRY/DESC=MANAGED BURNING-PRESCRIBE    YR/OF/INFO=    PROSS/RATE=000005875  CATEGRY/ADJ=0000003  UNITS/CD=
UNITS/CD/DESC=                  UNIFRM/THRUPT=   MNTHLY/THRUPT/%: (JAN=  ,FEB=  ,MAR=  ,APR=  ,MAY=  ,JUN=  ,JUL=  ,AUG=  ,SEP=  ,OCT=
NOV=  ,DEC=  )  HRS/PER/DAY=     DAYS/PER/WK=   WKS/PER/YR=     THRUPT/RATIO=       MAX/HRLY/THRUPT=               DATA/CONFIDENCE/RATING=
NITRG/%=       SULF/%=    ASH/%=      HEAT/CONT=        UNIFRM/HRLY/THRUPT=    HRLY/THRUPT/%: (00=  ,  ,  ,03=  ,  ,  ,06=  ,  ,  ,09=
  ,  ,12=  ,  ,  ,15=  ,  ,  ,18=  ,  ,  ,21=  ,  ,  )  NEDS/A7/COMM=                                 INFO/SOURCE/CODE=
INFO/SRCE/NAME=                            EIS/FLG/1=5  EIS/FLG/2=S  EIS/FLG/3=S  EIS/FLG/4=S  NEDS/FLG=S  NEDS/A7/FLG=S  #/POLL=05
POLL/ID EMIS/FACTR EF/CNF/RTNG EF/SRC/CD EF/CHNG POLL/SPC/DATA NEDS/A7/EMIS    POLL/NAME     EIS/FLG/5 EMIS/EST CONF/RTNG MX/HRLY/EMS
11101   0000017000      0                   F                                SUSPENDED PART.     C      0000150      0
42101   0000017000      0                   F                                SUSPENDED PART.     C      0000150      0
42401   0000000150      0                   F                                SULFUR DIOXIDE      C      0000001      0
42602   0000004000      0                   F                                   N  OXIDES        C      0000035      0
43101                                       F     0170000SUS                 HYDROCARBONS        S      0000000      0
```

(Page 6 of 6)

Figure AST16-2 - continued. Sample Output

## EIS/AS Test 17 - Ad Hoc

### Execute an EIS/AS Retrieval and Produce a Detailed Report of the Answer File

In this test run, an EIS/AS retrieval is executed using the cataloged procedure ECRTM30 which executes CRTLNGP (EC0090), the retrieval language processor program; the COBOL compiler; the linkage editor; and CRTGENR (EC0100), the generated retrieval program. The answer file produced by this procedure is listed in a detailed report using the cataloged procedure ECRPM20 which executes CRPMSTR (EC0130), the master file detailed report program.

The user-supplied EIS/AS retrieval language statements are combined with CRTSKEL, the retrieval skeleton program, by CRTLNGP (EC0090) to form the generated retrieval program, CRTGENR (EC0100). The generated program is then compiled, link-edited, and executed. An EIS/AS master file is input to CRTGENR (EC0100) which selects records according to the user-supplied retrieval language statements and creates an answer file. This answer file is passed to CRPMSTR (EC0130) to be listed in a detailed report. See Test 7 for a discussion of CRTLNGP (EC0090), CRTGENR (EC0100), and CRPMSTR (EC0130).

The run stream for this test run contains the JCL needed to execute the retrieval package and produce a detailed report of the answer file. The purpose of this test run is to retrieve all geographic suballocation and category disaggregation records that contain particulate data. The user should note that in this test run, if a description record qualifies for selection, then all category records subordinate to it will also be selected. This is because the $$SELECT card specifies that both record types are to be retrieved. Also, if a category record qualifies for selection, the description record to which it is subordinate will be selected. The run stream for this test run is shown in Figure AST17-1.

Substitutable parameters are used to supply the names of the master file input to CRTGENR (EC0100) and the answer file output from CRTGENR (EC0100). A substitutable parameter is also used to specify the name of the answer file input to CRPMSTR (EC0130). The names of the master file and answer file are ECMSTR7 (created in Test 9) and ECANSR4, respectively. The DD (data definition) information for the EIS/AS retrieval language statements input to CRTGENR (EC0100) and the option card file input to CRPMSTR (EC0130) are also supplied.

The EIS/AS retrieval language statements must conform to the format specified in Test 7. The retrieval language statements are also included in the run stream. The option card in this run stream specifies that the detailed report is to be printed with a maximum of 65 lines per page. Sample output produced by this run stream is shown in Figure AST17-2.

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```
//ASTEST17 JOB     (ACCOUNTING INFO)
//*
//*   EXECUTE AN EIS/AS RETRIEVAL AND LIST THE
//*   ANSWER FILE USING THE MASTER FILE DETAILED
//*   REPORT PROGRAM
//*
//TEST17A EXEC ECRTM30,
//        MSTRFIL=ECMSTR7,
//        ANSRFIL=ECANSR4
//*
//*   CREATE AND EXECUTE A RETRIEVAL PROGRAM
//*   IN WHICH THE USER SPECIFICAITONS APPEAR
//*   AS EIS/AS RETRIEVAL LANGUAGE STATEMENTS
//*
//GENER.INPUT DD *
$$SELECT       0 1
(GEOG-SUBALLOCATION-NBR          N = '00000'                         AND
DESC-POLLUTANT-ID                  = '11101')                        OR
(GEOG-SUBALLOCATION-NBR          N = '00000'                         AND
CATEGORY-DISAGGREG-NBR           N = '00'                            AND
CAT-POLLUTANT-ID                   = '11101')
$$END
//TEST17B EXEC ECRPR20,
//        MSTRFIL=ECANSR4
//*
//*   LIST THE ANSWER FILE PRODUCED IN
//*   STEP A USING THE DETAILED REPORT PROGRAM
//*
//LIST.OPTIONS DD *
65
```

Figure AST17-1. Run Stream

```
                              ETS/AS RETRIEVAL LANGUAGE PROCESSOR PROGRAM - DIAGNOSTIC REPORT                    PAGE     1

PROGRAM NAME: CRTLAGP (ECU090)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980

INPUT (CONTROL CARDS):
$$SELECT       0 1
(GEOG-SUBALLOCATION-NBR          N = '00000'                                AND
DESC-POLLUTANT-ID                  = '11101')                               OR
(GEOG-SUBALLOCATION-NBR          N = '00000'                                AND
CATEGORY-DISAGGREG-NBR           N = '00'                                   AND
CAT-POLLUTANT-ID                   = '11101')
$$END

NUMBER OF CONTROL CARDS READ:                      7
NUMBER OF RETRIEVAL SKELETON RECORDS READ:       837
NUMBER OF RETRIEVAL SOURCE RECORDS WRITTEN:      922
NUMBER OF CONDITIONAL MESSAGES:                    0
NUMBER OF ABORT MESSAGES:                          0
```

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Figure AST17-2. Sample Output

```
                    FIS/AS GENERATED RETRIEVAL PROGRAM - DIAGNOSTIC REPORT                    PAGE      1

PROGRAM NAME: CRTGENR (FCU100)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980


NUMBER OF MASTER FILE RECORDS READ:        371
NUMBER OF MASTER FILE RECORDS WRITTEN:      10
NUMBER OF CONDITIONAL MESSAGES:              0
NUMBER OF ABORT MESSAGES:                    0
```

(Page 2 of 6)

Figure ACT17-2 - continued. Sample Output

```
                                        AREA SOURCE MASTER FILE DETAIL LIST PROGRAM                    PAGE
                                                  DIAGNOSTIC REPORT

PROGRAM NAME: CRPMSTR (EC0130)
REVISION LEVEL:  1-00
LAST UPDATE #:  A-1
DATE INCORPORATED: FEBRUARY 1, 1980

OPTION IN EFFECT: 65 LINES PER PAGE MAXIMUM


NUMBER OF RECORDS READ:                     10
NUMBER OF DESCRIPTION RECORDS:               3
NUMBER OF CATEGORY RECORDS:                  7
NUMBER OF COMMENT RECORDS:                   0
```

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Figure AST17-2 - continued. Sample Output

```
                                   AREA SOURCE MASTER FILE DETAIL LIST PROGRAM
                                                  FILE LISTING                                                  PAGE     1

****************
**DESCRIPTION**    STATE   COUNTY   AQCR   AQCR NAME                                     PLANT ID   GEOG SUB #   SMSA   BATCH
****************   ---------------------------------------------------------------------------------------------------------
                     31     0015     011   WESTERN PART OF STATE OU                        0195       00135       1257     0

 RECORD    CATEGORY    CATEGORY     AIR     DEFINED     AREA                      MAJOR           SUBALLOCATION TECHNIQUE
  TYPE      NUMBER     DISAG  #    BASIN   AREA CODE    NAME                     ACTIVITY            CODE   DESCRIPTION
 ------------------------------------------------------------------------------------------------------------------------
  SG         000         00         011       123       CADE'S COVE              FARMING              15     CAASE

 DATE      SIP BASE    PROJ'D      SOURCE          LENGTH          PCP          POPULATION       NUMBER UTM     NUMBER OF
 YR/DAY      YEAR       YEAR        TYPE        AREA   UNITS CD    CODE     RUR %       TOTAL    COORDINATES    POLLUTANTS
 ----------------------------------------------------------------------------------------------------------------------
 79/303       79         83          A         137.59     12                  50       101,234        2              16

                                                          UTM  COORDINATES
 01  HORIZ      VERT      02  HORIZ      VERT     03  HORIZ      VERT     04  HORIZ      VERT     05  HORIZ      VERT     06  HORIZ      VERT
 -----------------        -----------------       -----------------       -----------------       -----------------       -----------------
 18  530.0  4310.0        18  535.1  4320.1

      SULFUR  CONTENTS               ASH  CONTENTS                GAS FUEL         DIESEL FUEL                    MOTOR   VEHICLE   MILES
 ANTH    BITUM   DIST   RESID'L      ANTH    BITUM                VEHICLES           VEHICLES   LIMITED ACCESS   RURAL     SUB  URBAN     URBAN
 COAL    COAL    OIL    OIL          COAL    COAL            LIGHT       HEAVY        HEAVY          ROADS        ROADS       ROADS        ROADS
 ---------------------------         --------------         --------------------   -----------   ---------------------------------------------


  FLAG    ETS   FLAGS                                  SIP ESTIMATES
 NEDS A1  1 2 3 4 5 6        TSP         SO2          NOX           HC             CO
 -------  -----------    -----------------------------------------------------------------
    5     S S S S S S        125         137          12        3,459            119

      ***     POLLUTANT                       ATTAINMENT    AQMA     EIS     ***     POLLUTANT                          ATTAINMENT    AQMA     EIS     ***
      ***    ID        NAME                     STATUS      NUMBER   F 7     ***    ID        NAME                        STATUS      NUMBER   F 7     ***
      -----------------------------------------------------------------------------------------------------------------------------------------------------
      ***   42601     NO                          U         000123    S      ***   42602     NO2                            A         000123    S      ***
      ***   11114     WINDBLN PART                U         000123    S      ***   21101     TOTAL DUSTFALL                 A         000123    S      ***
      ***   44101     TOTAL OXIDANTS              U         000123    S      ***   44201     OZONE                          A         000123    S      ***
      ***   42101     CO                          U         000123    S      ***   42102     CO2                            A         000123    S      ***
      ***   42603     NOX                         U         000123    S      ***   43101     HC                             A         000123    S      ***
      ***   43102     NONMETH HC                  U         000123    S      ***   43502     FORMALDEHYDE                   A         000123    S      ***
      ***   11101     TSP                         U         000123    S      ***   11103     BENZENE ORGNICS                A         000123    S      ***
      ***   42401     SO2                         U         000123    S      ***   42402     HYDROGEN SULFDE                A         000123    S      ***
```

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Figure AST17-2 - continued. Sample Output

```
                                        AREA SOURCE MASTER FILE DETAIL LIST PROGRAM
                                                       FILE LISTING                                              PAGE    2

****************
**CATEGORY 100**            STATE     COUNTY     AQCR     GEOG SUBALLOC #     CATEGORY #     CATEGORY DISAG #     MATCH
****************            ---------------------------------------------------------------------------------------------
                             51       0015       011          00135             100               10              0

RECORD    RECORD      CATEGORY                         CATEGORY        PROCESS          UNITS                NORMAL OPERATING     THRUPUT
 YEAR      TYPE       DESCRIPTION                      ADJUSTMENT        RATE        CODE   DESCRIPTION      HR/D D/WK  WK/YR      RATIO
------------------------------------------------------------------------------------------------------------------------------------------
 1979       SD        CAT 100 DISAG 10                     23              125                                 24    7     52         1.5

   UNIFORM                         MONTHLY THRUPUT PERCENTAGES                                   PERCENTAGES OF              HEAT
   THRUPUT    JAN   FEB   MAR   APR   MAY   JUN   JUL   AUG   SEP   OCT   NOV   DEC       NITROGEN    SULFUR    ASH      CONTENT
   -----------------------------------------------------------------------------       ----------------------------------------
     YES        8     8     9     8     8     9     8     8     9     8     8     9           .013       5.1     10.2       0034

  UNIFORM                                                HOURLY THRUPUT PERCENTAGES
  THRUPUT  0000 0100 0200 0300 0400 0500 0600 0700 0800 0900 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300
  ---------------------------------------------------------------------------------------------------------------------------------
   YES        4    4    4    4    4    5    4    4    4    4    4    5    4    4    4    4    4    5    4    4    4    4    4    5

MAX HRLY   DATA CONF       EIS FLAG     NEDS    NEDS A7                                  INFORMATION SOURCE             NUMBER OF
 THRUPUT     RATING       1  2  3  4    FLAG    FLAG  COMMENT                            CODE     NARRATIVE             POLLUTANTS
---------  ---------     -------------------   -------------------------------------   ------------------------------  ----------
               1          S  S  S  S      S       S                                       L       LOCAL GOVRNMT             16

 POLLUTANT                     POLLUTANT        EMISSION       EM FAC      EM FAC  EM FAC   EMISSIONS   NEDS A7   MAX HOURLY     CONF   FLAG
  ID   NAME                  SPECIFIC DATA       FACTOR       CONF RTNG    SOURCE  ORIGIN   ESTIMATES   EMISSION  MAX HOURLY     RTNG  EIS S
----------------------       ------------      --------      ---------    ------  ------   ---------   --------  ----------    -----------
11101  TSP                   1234                26.100          5           A       L            383                              3      S
11103  BENZENE ORGANICS                       1,201.449          5           A       L          1,727                              3      S
11114  AIRBORN PART                           1,201.198          5           A       L          1,784                              3      S
21101  TOTAL DUSTFALLS                        2,301.449          5           A       L          3,306                              3      S
22306  NITRATES                               1,241.196          5           A       L          1,784                              3      S
22403  TSULFATES                              2,316.409          5           A       L          3,330                              3      S
42101  CO                                     1,243.398          5           A       L          1,787                              3      S
42102  CO2                                    2,317.749          5           A       L          3,332                              3      S
42401  SO2                                    1,201.396          5           A       L          8,808                              3      S
42402  HYDROGEN SULFIDE                       2,000.749          5           A       L          2,876                              3      S
42601  NO                    J/112-A          1,201.998          5           A       L          1,726                              3      S
42602  NO2                   S-JJJJ-55        4,300.749          5           A       L             80                              3      S
42603  NOX                   J/1188A          1,201.736          5           A       L          1,727                              3      S
43101  HC                    S-JJJ5555       33,322.749          5           A       L         87,901                              3      S
43102  NONMETH HC                             1,201.446          5           A       L          1,727                              3      S
43502  FORMALDEHYDE          S-JJJ5555        4,200.749          5           A       L          6,034                              3      S
```

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Figure AST17-2 - continued. Sample Output

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```
                                              AREA SOURCE MASTER FILE DETAIL LIST PROGRAM
                                                            FILE LISTING                                                     PAGE      3

*****************
**CATEGORY 999**           STATE     COUNTY     AQCR      GEOG SUBALLOC #     CATEGORY #      CATEGORY DISAG #     BATCH
*****************          ------------------------------------------------------------------------------------------
                             31       0015                    00135               999                00             0

RECORD    RECORD      CATEGORY                      CATEGORY       PROCESS         UNITS               NORMAL OPERATING    THRUPUT
 YEAR      TYPE     DESCRIPTION                    ADJUSTMENT        RATE      CODE  DESCRIPTION       HR/D D/WK  WK/YR     RATIO
-----------------------------------------------------------------------------------------------------------------------------------
            CA

    UNIFORM                        MONTHLY THRUPUT PERCENTAGES                              PERCENTAGES OF          HEAT
    THRUPUT   JAN   FEB   MAR   APR   MAY   JUN   JUL   AUG   SEP   OCT   NOV   DEC      NITROGEN    SULFUR    ASH     CONTENT
    ------------------------------------------------------------------------------      -------------------------------------
      YES

  UNIFORM                                                 HOURLY THRUPUT PERCENTAGES
  THRUPUT  0000 0100 0200 0300 0400 0500 0600 0700 0800 0900 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300
  ---------------------------------------------------------------------------------------------------------------------------------
   YES

 MAX HRLY   DATA CONF        ETS FLAG    NEDS    NEDS A7                                        INFORMATION SOURCE            NUMBER OF
  THRUPUT     RATING       1  2  3  4    FLAG  FLAG  COMMENT                                    CODE     NARRATIVE            POLLUTANTS
----------  ---------    --------------------  ------------------------------------------   -----------------------------  -----------
                           S  S  S  S     S       S                                                                             1

  POLLUTANT                  POLLUTANT       EMISSION     EM FAC     EM FAC  EM FAC   EMISSIONS    NEDS A7   MAX HOURLY    CONF    FLAG
 ID   NAME                 SPECIFIC DATA     FACTOR      CONF RTNG   SOURCE  ORIGIN   ESTIMATES   EMISSION  MAX HOURLY    RTNG  ETS 5
----------------------     -----------     --------     ---------   ------  ------   ---------   --------   ----------    -----------
                                                                                                                                     S
```

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Figure AST17-2 - continued. Sample Output

## EIS/AS Test 18 - Ad Hoc

### Produce a Quick Look Report for County Data

In this test run, county data is extracted from the master file and listed in a formatted report using the cataloged procedure ECRPM40 which executes CRTQLED (EC0160), the quick look edit program; CRTQLEX (EC0170), the quick look extract program; and CRPQUIK (EC0180), the quick look report program.

The user-supplied quick look control cards are edited by CRTQLED (EC0160). As these cards are edited, CRTQLED (EC0160) builds two temporary control files; an extract control file which is passed to CRTQLEX (EC0170) and a report control file which is passed to CRPQUIK (EC0180). The extract control file contains the selection criteria needed by CRTQLEX (EC0170) to extract data from the master file. The report control file contains the information which determines the format of the report printed by CRPQUIK (EC0180). An EIS/AS master file is input to CRTQLEX (EC0170) from which data is selected according to the criteria contained in the extract control file passed from CRTQLED (EC0160). When data is extracted from the master file, it is written to a temporary file which is passed to CRPQUIK (EC0180). The data in this temporary file is printed in a report according to the format specifications contained in the report control file which is passed from CRTQLED (EC0160).

The control cards input to CRTQLED (EC0160) must conform to specific formats. See Figure AST18-1 for a description of the control card formats and Figure AST18-2 for definitions of the control card fields. Figure AST18-3 contains the data element names and their vaild abbreviations that may be coded on the control cards; Figure AST18-4 shows the EIS/AS quick look retrieval load sheet.

The run stream for this test run contains the JCL needed to execute the quick look package. The purpose of this test run is to create a report containing the fuel process rates for categories 1 through 64 in each county. Data will be extracted only when the fuel process rate field of a category record is non-blank. A page break is specified on the county (CNTY) field and for each page break a subtotal of the number of categories in the county will be printed. A total of the number of quick look lines will be printed at the end of the report. In this test run, the total number of quick look lines is equivalent to the total number of categories listed for each county. The run stream for this test run is shown in Figure AST18-5.

A substitutable parameter is used to specify the name of the master file input to CRTQLEX (EC0170). The name of the master file is ECMSTR7 (created in Test 9). The DD (data definition) information for the control cards input to CRTQLED (EC0160) is also supplied. Sample output produced by this run stream is shown in Figure AST18-6.

## $$SELECT Card

| Column # | Field Length | Data Type | Description |
|---|---|---|---|
| 1 - 8 | 8 | Alphanumeric | $$SELECT |
| 9 | 1 | | Unused |
| 10 - 72 | 63 | Alphanumeric | Report Title |
| 73 - 80 | 8 | Alphanumeric | Date |

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Figure AST18-1. Quick Look Control Card Formats

10 Card

| Column # | Field Length | Data Type | Description |
|---|---|---|---|
| 1 - 2 | 2 | Numeric | 10 |
| 3 | 1 | | Unused |
| 4 | 1 | Alphanumeric | Left Parenthesis |
| 5 | 1 | | Unused |
| 6 - 9 | 4 | Alphanumeric | Data Element Abbreviation |
| 10 | 1 | | Unused |
| 11 | 1 | Alphanumeric | Relational Operator |
| 12 | 1 | | Unused |
| 13 - 24 | 12 | Alphanumeric | Test Value |
| 25 | 1 | | Unused |
| 26 | 1 | Alphanumeric | Right Parenthesis |
| 27 | 1 | | Unused |
| 28 - 30 | 3 | Alphabetic | Boolean Operator |
| 31 - 80 | 50 | | Unused |

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Figure AST18-1 - continued. Quick Look Control Card Formats

20 Card

| Column # | Field Length | Data Type | Description |
|---|---|---|---|
| 1 - 2 | 2 | Numeric | 20 |
| 3 | 1 | | Unused |
| 4 - 5 | 2 | Alphabetic | Report Type |
| 6 - 80 | 75 | | Unused |

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Figure AST18-1 - continued. Quick Look Control Card Formats

30 Card

| Column # | Field Length | Data Type | Description |
|---|---|---|---|
| 1 - 2 | 2 | Numeric | 30 |
| 3 | 1 | | Unused |
| 4 - 7 | 4 | Alphanumeric | Data Element Abbreviation |
| 8 | 1 | Alphabetic | Page Break/Subtotaling Request |
| 9 | 1 | | Unused |
| 10 - 15 | 6 | | Repeat Columns 4-9 |
| 16 - 21 | 6 | | Repeat Columns 4-9 |
| 22 - 27 | 6 | | Repeat Columns 4-9 |
| 28 - 33 | 6 | | Repeat Columns 4-9 |
| 34 - 39 | 6 | | Repeat Columns 4-9 |
| 40 - 80 | 41 | | Unused |

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Figure AST18-1 - continued. Quick Look Control Card Formats

40 Card

| Column # | Field Length | Data Type | Description |
|---|---|---|---|
| 1 - 2 | 2 | Numeric | 40 |
| 3 | 1 | | Unused |
| 4 - 7 | 4 | Alphanumeric | Data Element Abbreviation |
| 8 | 1 | Alphabetic | Summation Request |
| 9 | 1 | | Unused |
| 10 - 15 | 6 | | Repeat Columns 4-9 |
| 16 - 21 | 6 | | Repeat Columns 4-9 |
| 22 - 27 | 6 | | Repeat Columns 4-9 |
| 28 - 33 | 6 | | Repeat Columns 4-9 |
| 34 - 39 | 6 | | Repeat Columns 4-9 |
| 40 - 45 | 6 | | Repeat Columns 4-9 |
| 46 - 51 | 6 | | Repeat Columns 4-9 |
| 52 - 57 | 6 | | Repeat Columns 4-9 |
| 58 - 63 | 6 | | Repeat Columns 4-9 |
| 64 - 80 | 17 | | Unused |

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Figure AST18-1 - continued. Quick Look Control Card Formats

## 50 Card

| Column # | Field Length | Data Type | Description |
|---|---|---|---|
| 1 - 2 | 2 | Numeric | 50 |
| 3 | 1 | | Unused |
| 4 - 7 | 4 | Alphanumeric | Data Element Abbreviation |
| 8 | 1 | | Unused |
| 9 - 13 | 5 | | Repeat Columns 4-8 |
| 14 - 18 | 5 | | Repeat Columns 4-8 |
| 19 - 23 | 5 | | Repeat Columns 4-8 |
| 24 - 28 | 5 | | Repeat Columns 4-8 |
| 29 - 33 | 5 | | Repeat Columns 4-8 |
| 34 - 38 | 5 | | Repeat Columns 4-8 |
| 39 - 80 | 42 | | Unused |

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Figure AST18-1 - continued. Quick Look Control Card Formats

51 Card

| Column # | Field Length | Data Type | Description |
|---|---|---|---|
| 1 - 2 | 2 | Numeric | 51 |
| 3 | 1 | | Unused |
| 4 - 8 | 5 | Numeric | Pollutant ID |
| 9 | 1 | | Unused |
| 10 - 15 | 6 | | Repeat Columns 4-9 |
| 16 - 21 | 6 | | Repeat Columns 4-9 |
| 22 - 27 | 6 | | Repeat Columns 4-9 |
| 28 - 33 | 6 | | Repeat Columns 4-9 |
| 34 - 39 | 6 | | Repeat Columns 4-9 |
| 40 - 80 | 41 | | Unused |

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Figure AST18-1 - continued. Quick Look Control Card Formats

### $$END Card

| Column # | Field Length | Data Type | Description |
|---|---|---|---|
| 1 - 5 | 5 | Alphanumeric | $$END |
| 6 - 80 | 75 | | Unused |

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Figure AST18-1 - continued. Quick Look Control Card Formats

Boolean Operator: Used to combine type 10 cards.
Card Type: 10
Valid Codes: AND, OR
Field Length: 3 characters

Data Element Abbreviation: A four-character abbreviation for a data element in the EIS/AS master file.
Card Type: 10, 30, 40, 50
Valid Codes: Valid abbreviations are shown in Figure AST18-3. Abbreviations that are not allowed on the 10 card or 30 card are designated by ** under the heading 10/30 Card.
Field Length: 4 characters

Date: A date to appear on each page of the quick look report or pollutant summary report.
Card Type: $$SELECT
Valid Codes: This field is not edited, but it is recommended that the date be entered as MM/DD/YY where MM, DD, and YY are the month, day, and year, respectively.
Field Length: 8 characters

Left Parenthesis: Used in conjunction with a right parenthesis to group type 10 cards.
Card Type: 10
Valid Codes: ( or blank
Field Length: 1 character

(Page 1 of 4)

Figure AST18-2. Quick Look Control Card Field Descriptions

Page Break/Subtotaling Request: Used to request a page break in the quick look report when the value of the associated data element changes. Also, if totaling is requesting on the 40 card, subtotals will be generated with each page break.

Card Type: 30
Valid Codes: X - page break/subtotaling requested
blank - page break/subtotaling not requested
Field Length: 1 character

Pollutant ID: Identifies pollutants for which emissions estimates are to be included in the pollutant summary report.

Card Type: 51
Valid Codes: 11101 - Total Suspended Particulate
42101 - Carbon Monoxide
42401 - Sulfur Dioxide
42601 - Nitric Oxide
42602 - Nitrogen Dioxide
42603 - Oxides of Nitrogen
43101 - Hydrocarbons
Field Length: 5 characters

Relational Operator: Specifies a comparison to be made between a data element in the master file and the test value.

Card Type: 10
Valid Codes: E - Equal to
U - Unequal
G - Greater than or equal to
L - Less than or equal to

(Page 2 of 4)

Figure AST18-2 - continued. Quick Look Control Card Field Descriptions

P - Present, any entry
B - Blank
Field Length: 1 character

Report Title: A title to appear on each page of the quick look report or pollutant summary report.
Card Type: $$SELECT
Field Length: 63 characters

Report Type: Specifies whether a quick look report or a pollutant summary report is to be produced.
Card Type: 20 card
Valid Codes: QL - Quick look report
SU - Pollutant summary report
Field Length: 2 characters

Right Parenthesis: Used in conjunction with a left parenthesis to group type 10 cards.
Card Type: 10
Valid Codes: ) or blank
Field Length: 1 character

Summation Request: Used to request totals for data elements in the quick look report. If a page break/subtotaling request is entered on the 30 card, a summation request will also cause subtotals to be generated at each page break for those data elements for which a summation request is entered.

(Page 3 of 4)

Figure AST18-2 - continued. Quick Look Control Card Field Descriptions

Card Type: 40

Valid Codes: X - summation requested
Blank - summation not requested

Field Length: 1 character

Test Value: Specifies a value against which the associated data element in the master file is compared.

Card Type: 10

Valid Codes: Valid codes for this field depend upon the associated data element. The test value should be entered with a format that corresponds to the format of the data element in the master file.

Field Length: Variable, no more than 12 characters. Refer to Figure AST18-3.

(Page 4 of 4)

Figure AST18-2 - continued. Quick Look Control Card Field Descriptions

Description Record Data Elements

| Data Element Name | Abbreviation | Data Element Length<br>10/30 Card | <br>40/50 Card | <br>40 Card If Totaled |
|---|---|---|---|---|
| State | STTE | 2 | N/A | |
| County | CNTY | 4 | 5 | |
| AQCR | AQCR | 3 | 5 | |
| Geographic Suballocation Number | GSUB | 5 | 6 | |
| Category Number | CATN | 3 | 5 | |
| Category Disaggregation Number | DISA | 2 | 5 | |
| Year | YEAR | 2 | 5 | |
| Day | DAYJ | 3 | 5 | |
| Air Basin | BASN | 3 | 5 | |
| SMSA | SMSA | 4 | 5 | |
| Area Name* | ANME | 20 | 21 | |
| Major Activity* | MACT | 20 | 21 | |
| Associated Plant ID | PLID | 4 | 5 | |
| SIP Base Year | SIPY | 2 | 5 | |
| Projected Year | PRJY | 2 | 5 | |
| Rural Population Percentage | RPPC | 2 | 5 | |
| Population | POPN | 8 | 9 | 14 |
| AQCR Name* | AQNM | 54 | 55 | |
| Suballocation Technique Code | SATC | 2 | 5 | |
| Suballocation Technique Description | SATD | ** | 21 | |
| Defined Area Code | DFAC | 3 | 5 | |

---

*Only the first 12 characters are used in selection

**Not valid on a 10 card or a 30 card

N/A Not allowed

(Page 1 of 8)

Figure AST18-3. Data Element Abbreviations and Lengths

Description Record Data Elements (continued)

| Data Element Name | Abbreviation | Data Element Length<br>10/30 Card | <br>40/50 Card | <br>40 Card If Totaled |
|---|---|---|---|---|
| Sulfur Content - Anthracite Coal | SUAC | 2 | 5 | |
| Sulfur Content - Bituminous Coal | SUBC | 2 | 5 | |
| Sulfur Content - Distillate Oil | SUDO | 2 | 5 | |
| Sulfur Content - Residual Oil | SURO | 2 | 5 | |
| Ash Content - Anthracite Coal | ASHA | 3 | 5 | |
| Ash Content - Bituminous Coal | ASHB | 3 | 5 | |
| Number of UTM Coordinates | NUTM | 1 | N/A | |
| UTM Zone 1 | UTZ1 | 2 | 5 | |
| UTM Horizontal 1 | UTH1 | 4 | 6 | |
| UTM Vertical 1 | UTV1 | 5 | 7 | |
| UTM Zone 2 | UTZ2 | 2 | 5 | |
| UTM Horizontal 2 | UTH2 | 4 | 6 | |
| UTM Vertical 2 | UTV2 | 5 | 7 | |
| UTM Zone 3 | UTZ3 | 2 | 5 | |
| UTM Horizontal 3 | UTH3 | 4 | 6 | |
| UTM Vertical 3 | UTV3 | 5 | 7 | |
| UTM Zone 4 | UTZ4 | 2 | 5 | |
| UTM Horizontal 4 | UTH4 | 4 | 6 | |
| UTM Vertical 4 | UTV4 | 5 | 7 | |
| UTM Zone 5 | UTZ5 | 2 | 5 | |
| UTM Horizontal 5 | UTH5 | 4 | 6 | |
| UTM Vertical 5 | UTV5 | 5 | 7 | |

---

N/A Not allowed

(Page 2 of 8)

Figure AST18-3 - continued. Data Element Abbreviations and Lengths

Description Record Data Elements (continued)

| Data Element Name | Abbreviation | Data Element Length<br>10/30 Card | 40/50 Card | 40 Card If Totaled |
|---|---|---|---|---|
| UTM Zone 6 | UTZ6 | 2 | 5 | |
| UTM Horizontal 6 | UTH6 | 4 | 6 | |
| UTM Vertical 6 | UTV6 | 5 | 7 | |
| Source Type | TYSO | 1 | 5 | |
| Length or Area | LNGL | 7 | 9 | |
| Units Code for Length or Area | LNGA | 2 | 5 | |
| TSP SIP Estimate | ETSP | 5 | 6 | 11 |
| $SO_2$ SIP Estimate | ES02 | 4 | 5 | 10 |
| $NO_x$ SIP Estimate | ENOX | 4 | 5 | 10 |
| HC SIP Estimate | ESHC | 5 | 6 | 11 |
| CO SIP Estimate | ESCO | 5 | 6 | 11 |
| Population Code | POPC | 1 | 5 | |
| Gas Fuel for Light Vehicles | GASL | 7 | 8 | 13 |
| Gas Fuel for Heavy Vehicles | GASH | 6 | 7 | 12 |
| Diesel Fuel for Heavy Vehicles | DESH | 6 | 7 | 12 |
| Motor Vehicle Miles for Limited Access Roads | VMLA | 6 | 7 | 12 |
| Motor Vehicle Miles for Rural Roads | VMRR | 6 | 7 | 12 |
| Motor Vehicle Miles for Suburban Roads | VMSR | 6 | 7 | 12 |
| Motor Vehicle Miles for Urban Roads | VMUR | 7 | 8 | 13 |
| Number of Pollutants | NPLD | 2 | 5 | |

(Page 3 of 8)

Figure AST18-3 - continued. Data Element Abbreviations and Lengths

Description Record Pollutant-Specific Data Elements

| | | Data Element Length | | |
|---|---|---|---|---|
| Data Element Name | Abbreviation | 10/30 Card | 40/50 Card | 40 Card If Totaled |
| Pollutant ID (Description Record) | PLTD | 5 | 6 | |
| Pollutant Name (Description Record) | PNMD | ** | 16 | |
| Attainment Status | ATTN | 1 | 5 | |
| AQMA Number | AQNO | 6 | 7 | |

---

** Not valid on a 10 card or a 30 card

(Page 4 of 8)

Figure AST18-3 - continued. Data Element Abbreviations and Lengths

## Category Record Data Elements

| Data Element Name | Abbreviation | Data Element Length<br>10/30 Card | <br>40/50 Card | <br>40 Card If Totaled |
|---|---|---|---|---|
| Category Description | CATD | ** | 26 | |
| Year of Information | INYR | 2 | 5 | |
| Process Rate | PROR | 9 | 10 | |
| Category Adjustment Value | CATA | 7 | 8 | |
| Units Code | UNTC | 2 | 5 | |
| Units Code Description | UNTD | ** | 13 | |
| Uniform Thruput | UNTP | 1 | 5 | |
| January Thruput | JATP | 2 | 5 | |
| February Thruput | FETP | 2 | 5 | |
| March Thruput | MRTP | 2 | 5 | |
| April Thruput | APTP | 2 | 5 | |
| May Thruput | MATP | 2 | 5 | |
| June Thruput | JNTP | 2 | 5 | |
| July Thruput | JLTP | 2 | 5 | |
| August Thruput | AUTP | 2 | 5 | |
| September Thruput | SETP | 2 | 5 | |
| October Thruput | OCTP | 2 | 5 | |
| November Thruput | NOTP | 2 | 5 | |
| December Thruput | DETP | 2 | 5 | |
| Hours per Day | HRDY | 2 | 5 | |
| Days per Week | DYWK | 1 | 5 | |

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** Not valid on a 10 card or a 30 card

(Page 5 of 8)

Figure AST18-3 - continued. Data Element Abbreviations and Lengths

Category Record Data Elements (continued)

| Data Element Name | Abbreviation | Data Element Length<br>10/30 Card | 40/50 Card | 40 Card If Totaled |
|---|---|---|---|---|
| Weeks per Year | WKYR | 2 | 5 | |
| Thruput Ratio | RATP | 4 | 6 | |
| Maximum Hourly Thruput | MHTP | 10 | 11 | |
| Data Confidence Rating | CONF | 1 | 5 | |
| Nitrogen Content | NITP | 3 | 5 | |
| Sulfur Content | SULP | 2 | 5 | |
| Ash Content | ASHP | 3 | 5 | |
| Heat Content | HTCT | 4 | 5 | |
| Uniform Hourly Thruput | UHTP | 1 | 5 | |
| Thruput for Hour Beginning 0000 | 00TP | 2 | 5 | |
| Thruput for Hour Beginning 0100 | 01TP | 2 | 5 | |
| Thruput for Hour Beginning 0200 | 02TP | 2 | 5 | |
| Thruput for Hour Beginning 0300 | 03TP | 2 | 5 | |
| Thruput for Hour Beginning 0400 | 04TP | 2 | 5 | |
| Thruput for Hour Beginning 0500 | 05TP | 2 | 5 | |
| Thruput for Hour Beginning 0600 | 06TP | 2 | 5 | |
| Thruput for Hour Beginning 0700 | 07TP | 2 | 5 | |
| Thruput for Hour Beginning 0800 | 08TP | 2 | 5 | |
| Thruput for Hour Beginning 0900 | 09TP | 2 | 5 | |
| Thruput for Hour Beginning 1000 | 10TP | 2 | 5 | |
| Thruput for Hour Beginning 1100 | 11TP | 2 | 5 | |
| Thruput for Hour Beginning 1200 | 12TP | 2 | 5 | |
| Thruput for Hour Beginning 1300 | 13TP | 2 | 5 | |

(Page 6 of 8)

Figure AST18-3 - continued. Data Element Abbreviations and Lengths

Category Record Data Elements (continued)

| Data Element Name | Abbreviation | Data Element Length<br>10/30 Card | 40/50 Card | 40 Card If Totaled |
|---|---|---|---|---|
| Thruput for Hour Beginning 1400 | 14TP | 2 | 5 | |
| Thruput for Hour Beginning 1500 | 15TP | 2 | 5 | |
| Thruput for Hour Beginning 1600 | 16TP | 2 | 5 | |
| Thruput for Hour Beginning 1700 | 17TP | 2 | 5 | |
| Thruput for Hour Beginning 1800 | 18TP | 2 | 5 | |
| Thruput for Hour Beginning 1900 | 19TP | 2 | 5 | |
| Thruput for Hour Beginning 2000 | 20TP | 2 | 5 | |
| Thruput for Hour Beginning 2100 | 21TP | 2 | 5 | |
| Thruput for Hour Beginning 2200 | 22TP | 2 | 5 | |
| Thruput for Hour Beginning 2300 | 23TP | 2 | 5 | |
| Information Source Code | ICSO | 1 | 5 | |
| Information Source Narrative | INSO | ** | 21 | |
| Number of Pollutants | NPLC | 2 | 5 | |

---

** Not valid on a 10 card or 30 card

(Page 7 of 8)

Figure AST18-3 - continued. Data Element Abbreviations and Lengths

## Category Record Pollutant-Specific Data Elements

| Data Element Name | Abbreviation | Data Element Length<br>10/30 Card | <br>40/50 Card | <br>40 Card If Totaled |
|---|---|---|---|---|
| Pollutant ID (Category Record) | PLTC | 5 | 6 | |
| Emission Factor | EFAC | 10 | 12 | |
| Emission Factor Confidence Rating | EFCR | 1 | 5 | |
| Emission Factor Source Code | EFSC | 1 | 5 | |
| Emission Factor Origin | EFOR | 1 | 5 | |
| Pollutant-Specific Data | SIZE | 10 | 11 | |
| NEDS A7 Emission | A7EM | 7 | 8 | |
| Pollutant Name (Category Record) | PNMC | ** | 16 | |
| Emissions Estimate | EEST | 7 | 8 | 13 |
| Confidence Rating | CNFR | 1 | 5 | |
| Maximum Hourly Emission | MHRE | 6 | 7 | 12 |

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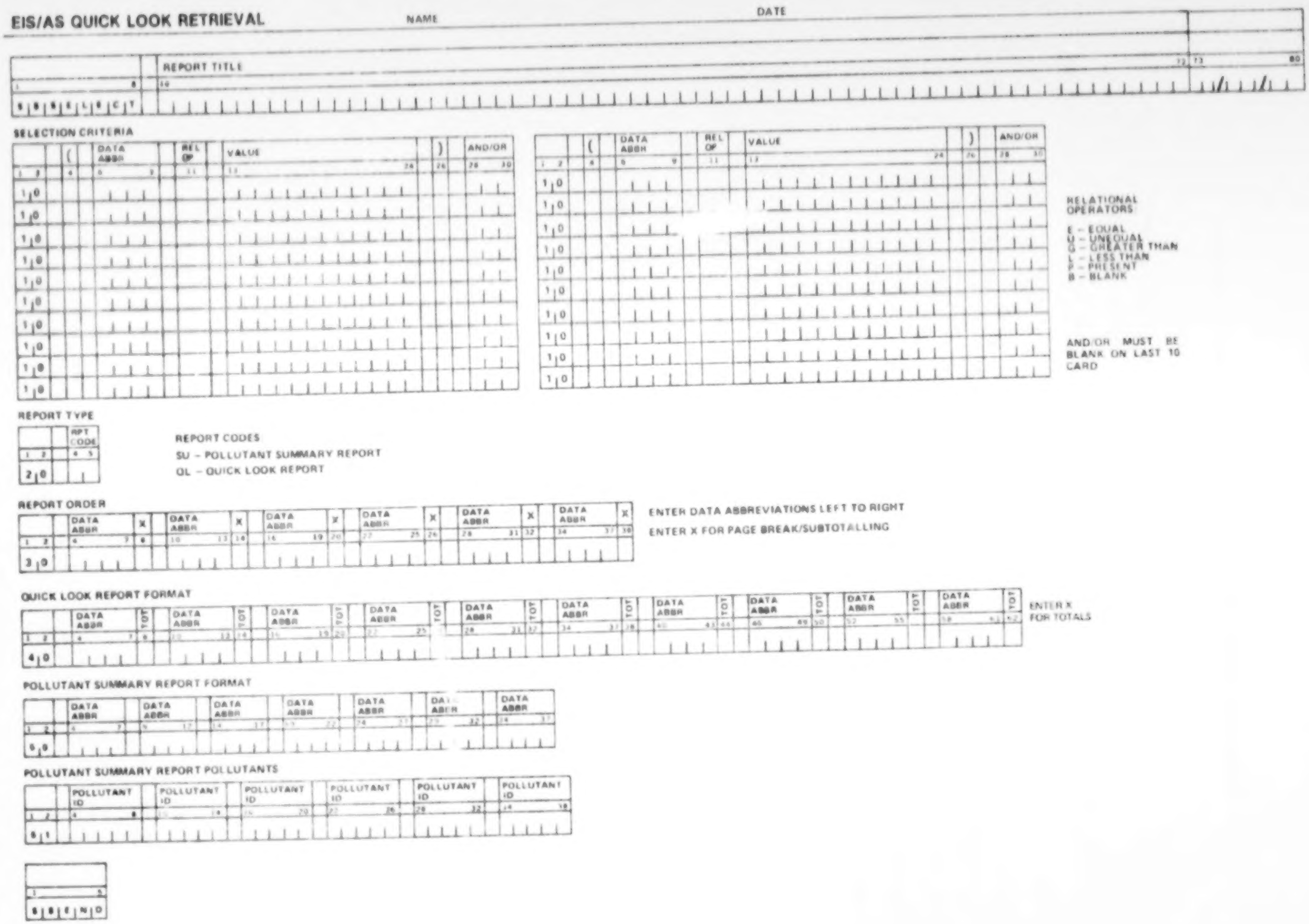
** Not valid on a 10 card or a 30 card

(Page 8 of 8)

Figure AST18-3 - continued. Data Element Abbreviations and Lengths



**EIS/AS QUICK LOOK RETRIEVAL** NAME DATE

| | | | |
|---|---|---|---|
| | REPORT TITLE | | |
| 1 8 | 10 72 | 73 80 |
| $$SELECT | | |

SELECTION CRITERIA

| | ( | DATA ABBR | REL OP | VALUE | ) | AND/OR |
|---|---|---|---|---|---|---|
| 1 2 | 4 | 5 9 | 11 | 13 24 | 26 | 28 30 |
| 1 0 | | | | | | |
| 1 0 | | | | | | |
| 1 0 | | | | | | |
| 1 0 | | | | | | |
| 1 0 | | | | | | |
| 1 0 | | | | | | |
| 1 0 | | | | | | |
| 1 0 | | | | | | |
| 1 0 | | | | | | |
| 1 0 | | | | | | |

| | ( | DATA ABBR | REL OP | VALUE | ) | AND/OR |
|---|---|---|---|---|---|---|
| 1 2 | 4 | 5 9 | 11 | 13 24 | 26 | 28 30 |
| 1 0 | | | | | | |
| 1 0 | | | | | | |
| 1 0 | | | | | | |
| 1 0 | | | | | | |
| 1 0 | | | | | | |
| 1 0 | | | | | | |
| 1 0 | | | | | | |
| 1 0 | | | | | | |
| 1 0 | | | | | | |
| 1 0 | | | | | | |

RELATIONAL OPERATORS

E – EQUAL
U – UNEQUAL
G – GREATER THAN
L – LESS THAN
P – PRESENT
B – BLANK

AND/OR MUST BE BLANK ON LAST 10 CARD

REPORT TYPE

| | RPT CODE |
|---|---|
| 1 2 | 4 5 |
| 2 0 | |

REPORT CODES
SU – POLLUTANT SUMMARY REPORT
QL – QUICK LOOK REPORT

REPORT ORDER

| | DATA ABBR | X | DATA ABBR | X | DATA ABBR | X | DATA ABBR | X | DATA ABBR | X | DATA ABBR | X |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 2 | 4 7 | 8 | 10 13 | 14 | 16 19 | 20 | 22 25 | 26 | 28 31 | 32 | 34 37 | 38 |
| 3 0 | | | | | | | | | | | | |

ENTER DATA ABBREVIATIONS LEFT TO RIGHT
ENTER X FOR PAGE BREAK/SUBTOTALLING

QUICK LOOK REPORT FORMAT

| | DATA ABBR | TOT | DATA ABBR | TOT | DATA ABBR | TOT | DATA ABBR | TOT | DATA ABBR | TOT | DATA ABBR | TOT | DATA ABBR | TOT | DATA ABBR | TOT | DATA ABBR | TOT | DATA ABBR | TOT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 2 | 4 7 | 8 | 10 13 | 14 | 16 19 | 20 | 22 25 | | 28 31 | 32 | 34 37 | 38 | 40 43 | 44 | 46 49 | 50 | 52 55 | | 58 61 | 62 |
| 4 0 | | | | | | | | | | | | | | | | | | | | |

ENTER X FOR TOTALS

POLLUTANT SUMMARY REPORT FORMAT

| | DATA ABBR | DATA ABBR | DATA ABBR | DATA ABBR | DATA ABBR | DATA ABBR | DATA ABBR |
|---|---|---|---|---|---|---|---|
| 1 2 | 4 7 | 9 12 | 14 17 | 19 22 | 24 27 | 29 32 | 34 37 |
| 5 0 | | | | | | | |

POLLUTANT SUMMARY REPORT POLLUTANTS

| | POLLUTANT ID | POLLUTANT ID | POLLUTANT ID | POLLUTANT ID | POLLUTANT ID | POLLUTANT ID |
|---|---|---|---|---|---|---|
| 1 2 | 4 8 | 10 14 | 16 20 | 22 26 | 28 32 | 34 38 |
| 5 1 | | | | | | |

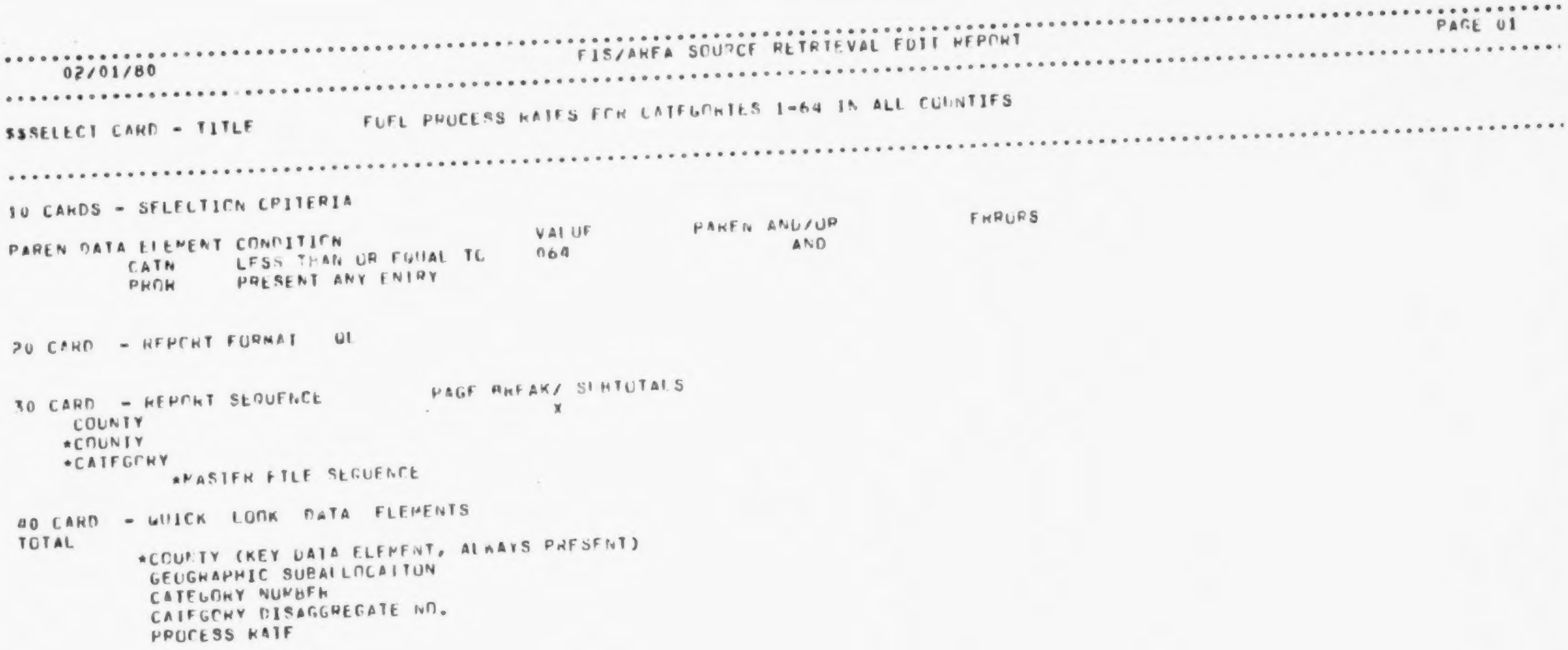
| |
|---|
| 1 5 |
| $$END |

Figure AST18-4. EIS/AS Quick Look Retrieval Load Sheet

```
//ASTEST18 JOB     (ACCOUNTING INFO)
//*
//*   EXECUTE A QUICK LOOK REPORT FOR COUNTY DATA
//*
//TEST18A EXEC ECRP400,
//        MSTRFIL=FCMSTR7
//*
//*   CREATE A REPORT CONTAINING THE FUEL PROCESS RATES FOR
//*   CATEGORIES 1 THROUGH 64 IN EACH COUNTY
//*
//FDT1.INPUT DD *
$$SELECT      FUEL PROCESS RATES FOR CATEGORIES 1-64 IN ALL COUNTIES      02/01/80
10   CATN L 064              AND
10   PROR P
20 OL
30 CNTYX
40 GSUB  CATN  UTSA  PROR
$$END
```

Figure AST18-5.  Run Stream

Reproduced from
best available copy.



```
                                                                                                        .......................
                                                                                                        PAGE 01
.....................................................FIS/AREA SOURCE RETRIEVAL EDIT REPORT.............................
     02/01/80
.........................................................................................................................
$$SELECT CARD - TITLE         FUEL PROCESS RATES FOR CATEGORIES 1-64 IN ALL COUNTIES
.........................................................................................................................

.........................................................................................................................
10 CARDS - SELECTION CRITERIA
                                                   VALUE         PAREN AND/OR            ERRORS
PAREN DATA ELEMENT CONDITION                                           AND
           CATN     LESS THAN OR EQUAL TO      064
           PROR     PRESENT ANY ENTRY


20 CARD  - REPORT FORMAT   01


30 CARD  - REPORT SEQUENCE          PAGE BREAK/ SUBTOTALS
     COUNTY                                    X
    *COUNTY
    *CATEGORY
            *MASTER FILE SEQUENCE

40 CARD  - QUICK  LOOK  DATA  ELEMENTS
TOTAL
          *COUNTY (KEY DATA ELEMENT, ALWAYS PRESENT)
           GEOGRAPHIC SUBALLOCAITON
           CATEGORY NUMBER
           CATEGORY DISAGGREGATE NO.
           PROCESS RATE
```

(Page 1 of 6)

Figure AST18-6. Sample Output

```
PROGRAM NAME: CRTWLEX (EC0170)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980
                                                             RETRIEVAL EXTRACT REPORT

     02/01/80                                                 ETS-AREA SOURCE

........... ...........................................................................................................

     NUMBER OF RECORDS READ              371
     NUMBER OF RECORDS WRITTEN           191

          CONTINUING WITH RETRIEVAL
```

(Page 2 of 6)

Figure AST18-6 - continued. Sample Output

```
RUN DATE 02/01/80                                  SOUTH CAROLINA                                  PAGE    1
                                                  EIS/AREA SOURCE
                                                 QUICK LOOK REPORT

                               FUEL PROCESS RATES FOR CATEGORIES 1-64 IN ALL COUNTIES

COUN GEOGR CATG DIS- PROCESS
TY   SUBAL NO.  AGGR RATE
............................................................................................................
0680 00000 002  00   000000005
0680 00000 003  00   000000099
0680 00000 005  00   000000013
0680 00000 006  00   000000089
0680 00000 008  00   000000011
0680 00000 011  00   000000001
0680 00000 016  00   000000008
0680 00000 018  00   000000001
0680 00000 024  00   000000270
0680 00000 025  00   000000001
0680 00000 026  00   000000025
0680 00000 039  00   000001166
0680 00000 044  00   000000011
0680 00000 045  00   000000013
0680 00000 047  00   000000584
0680 00000 052  00   000000575
0680 00000 053  00   000000789
0680 00000 054  00   000000273
0680 00000 055  00   000015840
0680 00000 057  00   000114000
0680 00000 060  00   000000457
0680 00000 061  00   000002870

NUMBER OF RECORDS IN THIS CNTY IS     22
```

(Page 3 of 6)

Figure AST18-6 - continued. Sample Output

```
RUN DATE 02/01/80                                  SOUTH CAROLINA                                        PAGE   2
                                                  EIS/AREA SOURCE
                                                 QUICK LOOK REPORT

                               FUEL PROCESS RATES FOR CATEGORIES 1-68 IN ALL COUNTIES

COUN GEOGR CATG DIS- PROCESS
TY   SUBAL NO.  AGGR RATE
..................................................................................................................
1280 00000 001  00   000040123
1280 00000 002  00   000020010
1280 00000 003  00   000009750
1280 00000 004  00   000008900
1280 00000 005  00   000023550
1280 00000 006  00   000000050
1280 00000 007  00   000023500
1280 00000 008  00   000030750
1280 00000 009  00   000042100
1280 00000 010  00   000000390
1280 00000 011  00   000008750
1280 00000 012  00   000000005
1280 00000 013  00   000098750
1280 00000 014  00   000123400
1280 00000 015  00   000009650
1280 00000 016  00   000021500
1280 00000 017  00   000000980
1280 00000 018  00   000056900
1280 00000 019  00   000000025
1280 00000 020  00   000002350
1280 00001 001  00   000059850
1280 00001 001  01   000059850
1280 00001 001  35   000059850
1280 00001 001  99   000059850
1280 00500 001  01   000059850
1280 00500 001  22   000059850
1280 00500 001  70   000059850
1280 99999 001  99   000059850

NUMBER OF RECORDS IN THIS CNTY IS     28
```

(Page 4 of 6)

Figure AST18-6 - continued.  Sample Output

```
RUN DATE 02/01/80                                SOUTH CAROLINA                                          PAGE   3
                                                EIS/AREA SOURCE
                                               QUICK LOOK REPORT

                               FILE PROCESS RATES FOR CATEGORIES 1-60 IN ALL COUNTIES

COUN GEOGR CATG DIS- PROCESS
TY   SUBAL NO.  AGGR RATE
.............................................................................................................
1380 00000 002  00   000000013
1380 00000 003  00   000000273
1380 00000 006  00   000000052
1380 00000 008  00   000000016
1380 00000 009  00   000000001
1380 00000 010  00   000000002
1380 00000 011  00   000000019
1380 00000 016  00   000000035
1380 00000 018  00   000000007
1380 00000 024  00   000000233
1380 00000 025  00   000000002
1380 00000 026  00   000000024
1380 00000 039  00   000001199
1380 00000 044  00   000000011
1380 00000 045  00   000000016
1380 00000 047  00   000000511
1380 00000 052  00   000000076
1380 00000 053  00   000001700
1380 00000 054  00   000000218
1380 00000 055  00   000019404
1380 00000 057  00   000152000
1380 00000 060  00   000000207
1380 00000 061  00   000009405

NUMBER OF RECORDS IN THIS CNTY IS     23
```

(Page 5 of 6)

Figure AST18-6 - continued. Sample Output

```
RUN DATE 02/01/80
                                  SOUTH CAROLINA                                PAGE    4
                                  LIN/AREA SOURCE
                                  QUICK LOOK REPORT

                  FIRE PROCESS RATES FOR CATEGORIES 1-64 IN ALL COUNTIES

COUN GEOGR CATG PISB PROCESS
TY   SUBAL NO.  AGGR RATE
****************************************************************************************************
7860 00000 001  00   000000001
7860 00000 002  00   000000081
7860 00000 003  00   000000183
7860 00000 005  00   000000096
7860 00000 008  00   000000004
7860 00000 009  00   000000036
7860 00000 010  00   000000045
7860 00000 011  00   000000025
7860 00000 014  00   000000281
7860 00000 016  00   000000042
7860 00000 017  00   000000170
7860 00000 018  00   000000023
7860 00000 021  00   000001467
7860 00000 039  00   000001184
7860 00000 044  00   000000003
7860 00000 045  00   000000314
7860 00000 047  00   000000767
7860 00000 052  00   000000066
7860 00000 053  00   000000567
7860 00000 054  00   000000207
7860 00000 055  00   000000030
7860 00000 057  00   000000167
7860 00000 058  00   000000285
7860 00000 059  00   000000649
7860 00000 064  00   000000080

NUMBER OF RECORDS IN THIS CNTY IS     25


TOTAL NUMBER OF QUICK LOOK LINES EQUALS    191
```

(Page 6 of 6)

Figure AST18-6 - continued. Sample Output

## EIS/AS Test 19 - Ad Hoc

### Produce a Quick Look Report for Particulate Emissions

In this test run, a report containing particulate emissions is generated using the cataloged procedure ECRPM40 which executes CRTQLED (EC0160), the quick look edit program; CRTQLEX (EC0170), the quick look extract program; and CRPQUIK (EC0180), the quick look report program.

CRTQLED (EC0160) edits user-supplied control cards and creates two temporary control files; an extract control file which is passed to CRTQLEX (EC0170), and a report control file which is passed to CRPQUIK (EC0180). See EIS/AS Test 18 for a discussion of these programs and files.

The run stream for this test run contains the JCL needed to execute the quick look package. The purpose of this test run is to create a report containing particulate emissions for categories 1 through 27 in each county. Since emissions estimate is a pollutant-related field, the pollutant code must be specified as part of the selection criteria in the user-supplied control cards (in this case the pollutant code is 11101).

A page break is specified at the county level and the totalling option has been specified for emissions estimates. Consequently, a subtotal of emissions estimates will be printed for each county (page break) and a final total of all emissions estimates contained in the report will be printed at the end of the report. The run stream for this test run is shown in Figure AST19-1.

A substitutable parameter is used to specify the name of the master file input to CRTQLEX (EC0170). The name of the master file is ECMSTR7 (created in Test 9). The DD (data definition) information for the control cards input to CRTQLED (EC0160) is also supplied. Sample output produced by this run stream is shown in Figure AST19-2.

```
//ASTEST19 JOB    (ACCOUNTING INFO)
//*
//*   EXECUTE A QUICK LOOK REPORT FOR PARTICULATE
//*   EMISSIONS
//*
//TEST19A EXEC ECRP400,
//        MSTRFIL=ECMSTR7
//*
//*   CREATE A REPORT CONTAINING PARTICULATE EMISSIONS
//*   FOR CATEGORIES 1 THROUGH 27 IN EACH COUNTY
//*   SPECIFY A PAGE BREAK AT THE COUNTY LEVEL AND THE
//*   TOTALLING OPTION
//*
//EUTI.INPUT DD *
$$SELECT   PARTICULATE EMISSIONS FOR CATEGORIES 1-27 IN ALL COUNTIES    02/01/80
10   CATN G 001            AND
10   CATN L 027            AND
10   PLTC E 11101
20 QL
30 CNTY*
40 GSUP  CATN  DTSA  PLTC  EEST*
$$END
```

Figure AST19-1. Run Stream

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```
************************************************************************************************************************
    02/01/80                                        EIS/AREA SOURCE RETRIEVAL EDIT REPORT                          PAGE 01
************************************************************************************************************************

$$SELECT CARD - TITLE        PARTICULATE EMISSIONS FOR CATEGORIES 1-27 IN ALL COUNTIES

************************************************************************************************************************

10 CARDS - SELECTION CRITERIA

PAREN DATA ELEMENT CONDITION                     VALUE         PAREN AND/OR           ERRORS
           CATN     GREATER THAN OR EQUAL TO 001                       AND
           CATN     LESS THAN OR EQUAL TO    027                       AND
           PLTC     EQUAL TO                 11101


20 CARD  - REPORT FORMAT   WL


30 CARD  - REPORT SEQUENCE          PAGE BREAK/ SUBTOTALS
     COUNTY                                    X
    *COUNTY
    *CATEGORY
           *MASTER FILE SEQUENCE

40 CARD  - QUICK  LOOK  DATA  ELEMENTS
TOTAL
          *COUNTY (KEY DATA ELEMENT, ALWAYS PRESENT)
           GEOGRAPHIC SUBALLOCATION
           CATEGORY NUMBER
           CATEGORY DISAGGREGATE NO.
           POLLUTANT ID - CATEGORY REC
  X        EMISSIONS ESTIMATES
```

(Page 1 of 6)

Figure AST19-2.  Sample Output

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```
PROGRAM NAME: CATWLEX (ECU170)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980

                                                         RETRIEVAL EXTRACT REPORT

    02/01/80                                             EIS-AREA SOURCE

.........................................................................................................

    NUMBER OF RECORDS READ              371
    NUMBER OF RECORDS WRITTEN           116

         CONTINUING WITH RETRIEVAL



-  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -  -



 RUN DATE 02/01/80                                   SOUTH CAROLINA                                PAGE   1
                                                     EIS/AREA SOURCE
                                                    QUICK LOOK REPORT

                                 PARTICULATE EMISSIONS FOR CATEGORIES 1-27 IN ALL COUNTIES

COUN GEOGR CATG DIS- PLT        EMISS
TY   SUBAL NO.  AGGR CATGY      ESTIM
.........................................................................................................
0680 00000 002  00   11101      0000000
0680 00000 003  00   11101      0000000
0680 00000 004  00   11101      0000000
0680 00000 005  00   11101      0000000
0680 00000 006  00   11101      0000001
0680 00000 008  00   11101      0000000
0680 00000 011  00   11101      0000000
0680 00000 013  00   11101      0000000
0680 00000 016  00   11101      0000000
0680 00000 018  00   11101      0000000
0680 00000 024  00   11101      0000002
0680 00000 025  00   11101      0000000
0680 00000 026  00   11101      0000000
0680 00000 027  00   11101      0000000

SUBTOTAL
0680                                  3

NUMBER OF RECORDS IN THIS CNTY IS    14
```

(Page 2 of 6)

Figure AST19-2 - continued. Sample Output

```
RUN DATE 02/01/80                               SOUTH CAROLINA                                    PAGE   2
                                               EIS/AREA SOURCE
                                              QUICK LOOK REPORT

                          PARTICULATE EMISSIONS FOR CATEGORIES 1-27 IN ALL COUNTIES

COUN GEOGR CATG DIS- PLT        EMISS
TY   SUBAL NO.  AGGR CATGY      ESTIM
..............................................................................................................
1280 00000 001  00   11101      0000000
1280 00000 002  00   11101      0000080
1280 00000 003  00   11101      0000015
1280 00000 004  00   11101      0000018
1280 00000 005  00   11101      0001830
1280 00000 006  00   11101      0000002
1280 00000 007  00   11101      0000353
1280 00000 008  00   11101      0000579
1280 00000 009  00   11101      0001263
1280 00000 010  00   11101      0000008
1280 00000 011  00   11101      0000049
1280 00000 012  00   11101      0000000
1280 00000 013  00   11101      0004385
1280 00000 014  00   11101      0000012
1280 00000 015  00   11101      0000030
1280 00000 016  00   11101      0000848
1280 00000 017  00   11101      0000048
1280 00000 018  00   11101      0001050
1280 00000 019  00   11101      0000001
1280 00000 020  00   11101      0000061

SUBTOTAL
1280                              10647

NUMBER OF RECORDS IN THIS CNTY IS     20
```

(Page 3 of 6)

Figure AST19-2 - continued.  Sample Output

```
RUN DATE 02/01/80                      SOUTH CAROLINA                                  PAGE   3
                                       EIS/AREA SOURCE
                                       QUICK LOOK REPORT

                    PARTICULATE EMISSIONS FOR CATEGORIES 1-27 IN ALL COUNTIES

COUN GEOGR CATE DIS- PLT        EMISS
TY   SUBAL NO.  AGGR CATGY      ESTIM
..........................................................................................
1380 00000 002  00   11101      0000000
1380 00000 003  00   11101      0000000
1380 00000 006  00   11101      0000001
1380 00000 008  00   11101      0000000
1380 00000 009  00   11101      0000000
1380 00000 010  00   11101      0000000
1380 00000 011  00   11101      0000000
1380 00000 016  00   11101      0000000
1380 00000 016  00   11101      0000000
1380 00000 024  00   11101      0000002
1380 00000 025  00   11101      0000000
1380 00000 026  00   11101      0000000
1380 00000 027  00   11101      0000000

SUBTOTAL
1380                                  3

NUMBER OF RECORDS IN THIS CNTY IS    13
```

(Page 4 of 6)

Figure AST19-2 - continued. Sample Output

```
RUN DATE 02/01/80                                        SOUTH CAROLINA                                          PAGE    4
                                                        EIS/AREA SOURCE
                                                       QUICK LOOK REPORT

                                   PARTICULATE EMISSIONS FOR CATEGORIES 1-27 IN ALL COUNTIES

COUN GEOGR CATG DIS- PLT          EMISS
TY   SUBAL NO.  AGGR CATGY        ESTIM
.........................................................................................................................
1780 00000 002  00   11101        0000000
1780 00000 003  00   11101        0000000
1780 00000 005  00   11101        0000000
1780 00000 006  00   11101        0000001
1780 00000 008  00   11101        0000000
1780 00000 011  00   11101        0000000
1780 00000 016  00   11101        0000000
1780 00000 018  00   11101        0000000
1780 00000 024  00   11101        0000002
1780 00000 025  00   11101        0000000
1780 00000 026  00   11101        0000000
1780 00000 027  00   11101        0000000

SUBTOTAL
1780                                    3

NUMBER OF RECORDS IN THIS CNTY IS      12



- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


RUN DATE 02/01/80                                        SOUTH CAROLINA                                          PAGE    5
                                                        EIS/AREA SOURCE
                                                       QUICK LOOK REPORT

                                   PARTICULATE EMISSIONS FOR CATEGORIES 1-27 IN ALL COUNTIES

COUN GEOGR CATG DIS- PLT          EMISS
TY   SUBAL NO.  AGGR CATGY        ESTIM
.........................................................................................................................
2238 00000 023  00   11101        0000000

SUBTOTAL
2238                                    0

NUMBER OF RECORDS IN THIS CNTY IS       1
```

(Page 5 of 6)

Figure AST19-2 - continued. Sample Output

```
RUN DATE 02/01/80                              SOUTH CAROLINA                                  PAGE    9
                                              EIS/AREA SOURCE
                                             QUICK LOOK REPORT

                           PARTICULATE EMISSIONS FOR CATEGORIES 1-27 IN ALL COUNTIES

COUN GEOGR CATG DIS- PLT        EMISS
TY   SUBAL NO.  AGGR CATGY      ESTIM
...........................................................................................................
7860 00000 001  00   11101      0000000
7860 00000 002  00   11101      0000001
7860 00000 003  00   11101      0000000
7860 00000 005  00   11101      0000000
7860 00000 008  00   11101      0000000
7860 00000 009  00   11101      0000000
7860 00000 010  00   11101      0000000
7860 00000 011  00   11101      0000000
7860 00000 014  00   11101      0000002
7860 00000 016  00   11101      0000000
7860 00000 017  00   11101      0000002
7860 00000 018  00   11101      0000000
7860 00000 021  00   11101      0000023
7860 00000 022  00   11101      0000000
7860 00000 027  00   11101      0000091

SUBTOTAL
7860                                119

NUMBER OF RECORDS IN THIS CNTY IS    15

 GRAND TOTALS


- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


 RUN DATE 02/01/80                              SOUTH CAROLINA                                  PAGE   10
                                               EIS/AREA SOURCE
                                              QUICK LOOK REPORT

                           PARTICULATE EMISSIONS FOR CATEGORIES 1-27 IN ALL COUNTIES

 COUN GEOGR CATG DIS- PLT        EMISS
 TY   SUBAL NO.  AGGR CATGY      ESTIM
...........................................................................................................
                                  10909


 TOTAL NUMBER OF QUICK LOOK LINES EQUALS   116
```

(Page 6 of 6)

Figure AST19-2 - continued. Sample Output

## EIS/AS Test 20 - Ad Hoc

## Produce a Quick Look Pollutant Summary Report for the Criteria Pollutants

In this test run, a summary report of the criteria pollutant emissions is obtained using the cataloged procedure ECRPM40 which executes CRTQLED (EC0160), the quick look edit program; CRTQLEX (EC0170), the quick look extract program; and CRPQUIK (EC0180), the quick look report program.

The user-supplied control cards input to CRTQLED (EC0160) are slightly different from those used to execute a regular quick look report. In a pollutant summary report, the 50-card is the counterpart of the 40-card which is used in a quick look report. See EIS/AS Test 18 for further discussion of the quick look package.

The run stream for this test run contains the JCL needed to execute the quick look package. The purpose of this test run is to obtain a summary report of the criteria pollutant emissions. The criteria pollutants and their associated pollutant codes are: total suspended particulates (11101), carbon monoxide (42101), sulfur dioxide (42401), oxides of nitrogen (42603), and hydrocarbons (43101). The pollutant summary report automatically lists the county, category number, category disaggregate number, and emissions estimates for the criteria pollutants. Additional information may be requested through the use of the 50-card, but the additional information must not be related to a specific pollutant. For this test run, additional information specified on the 50-card includes the geographic suballocation number and the year of the information.

A page break occurs at the county level with subtotals of the emissions estimates printed for each county. A total of emissions estimates for each state is also printed. If the input master file contains information from only one state, then the total emissions for the state will also be the total emissions listed in the report. Since no 10-cards are input to CRTQLED (EC0160) in this test run, all master file category records will be processed for selection. Totaling and page breaks cannot be requested for a pollutant summary report, therefore, no 30-card is submitted in this test run. The run stream for this test run is shown in Figure AST20-1.

A substitutable parameter is used to specify the name of the master file input to CRTQLEX (EC0170). The name of the master file is ECMSTR7 (created in Test 7). The DD (data definition) information for the control cards input to CRTQLED (EC0160) is also supplied. Sample output produced by this test run is shown in Figure AST20-2.

```
//ASTEST20 JOB    (ACCOUNTING INFO)
//*
//*   PRODUCE A POLLUTANT SUMMARY REPORT
//*
//TEST20A EXEC ECHPR40,
//       MSTRFIL=ECMSTR7
//*
//*   PRODUCE THE SUMMARY REPORT WITH
//*   GEOGRAPHIC SUBALLOCATION NUMBER AND
//*   YEAR OF INFORMATION FIELDS INCLUDED
//*   IN THE REPORT
//*
//EDIT.INPUT DD *
$$SELECT        SUMMARY REPORT FOR THE CRITERIA POLLUTANTS                  02/01/80
20 SU
50 GSUB INYR
$$END
```

Figure AST20-1. Run Stream

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```
..................................................................................................................................
     02/01/80                                          FIS/AREA SOURCE RETRIEVAL EDIT REPORT                                PAGE 01
..................................................................................................................................
$$SELECT CARD - TITLE          SUMMARY REPORT FOR THE CRITERIA POLLUTANTS

..................................................................................................................................

20 CARD  - REPORT FORMAT   SU

30 CARD  - REPORT SEQUENCE             PAGE BREAK
     *COUNTY
     *CATEGORY
             **MASTER FILE SEQUENCE

50 CARD  - SUMMARY DATA ELEMENTS
     *COUNTY
     *CATEGORY
     *DISAGGREGATE
      GEOGRAPHIC SUBALLOCATION
      YEAR OF INFO
             **KEY FIELDS

CRITERIA SUMMARY POLLUTANTS
      TSP
      CO
      SO2
      NOX
      HC
```

(Page 1 of 4)

Figure AST20-2. Sample Output

```
PROGRAM NAME: CRTULEX (FCU170)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980
                                                          RETRIEVAL EXTRACT REPORT

     02/01/80                                             EIS-AREA SOURCE

**************************************************************************************************

     NUMBER OF RECORDS READ              371
     NUMBER OF RECORDS WRITTEN           334

          CONTINUING WITH RETRIEVAL
```

(Page 2 of 4)

Figure AST20-2 - continued. Sample Output

```
RUN DATE 02/01/80                                              [illegible]                                                PAGE   1
                                                             EIS/AREA SOURCE
                                                        POLLUTANT SUMMARY REPORT

                                          SUMMARY REPORT FOR THE CRITERIA POLLUTANTS

COUN CATE DIS  GEOGR INFO                                         TSP          CO           SO2          NOX          HC
TY   GORY AGGR SUBAL YEAR                                         EMISSIONS    EMISSIONS    EMISSIONS    EMISSIONS    EMISSIONS
************************************************************************************************************************************
1280 001  00   00000 79                                                 0            0            0            0            0
1280 002  00   00000 79                                                80            4            0           15         1331
1280 003  00   00000 79                                                15            3            6            5          688
1280 004  00   00000 79                                                18            3            0            4          592
1280 005  00   00000 79                                              1830            7           19           60         1580
1280 006  00   00000 79                                                 2            0            0            0            3
1280 007  00   00000 79                                               353            7           47           22         1563
1280 008  00   00000 79                                               579           10           76           36         2311
1280 009  00   00000 79                                              1263           17          295          317         2800
1280 010  00   00000 79                                                 8            0            1            2           26
1280 011  00   00000 79                                                44            3           26           16          582
1280 012  00   00000 79                                                 0            0            0            0            0
1280 013  00   00000 79                                              4385           28          217          412         6567
1280 014  00   00000 79                                                12           35            0            1         8206
1280 015  00   00000 79                                                30            3            5            4          655
1280 016  00   00000 79                                               848            6           97           25         1430
1280 017  00   00000 79                                                48            0            6            3           65
1280 018  00   00000 79                                              1050           16          142           75         3784
1280 019  00   00000 79                                                 1            0            0            0            2
1280 020  00   00000 79                                                81            1            6            6          156
1280 999  00   00000                                                10647          140          943         1038        32287
1280 001  00   00001 79                                                 0            0            0            0            0
1280 001  01   00001 79                                                 0            0            0            0            0
1280 001  35   00001 79                                                 0            0            0            0            0
1280 001  99   00001 79                                                 0            0            0            0            0
1280 999  00   00001                                                    0            0            0            0            0
1280 001  01   00500 79                                                 0            0            0            0            0
1280 001  22   00500 79                                                 0            0            0            0            0
1280 001  70   00500 79                                                 0            0            0            0            0
1280 999  00   00500                                                    0            0            0            0            0
1280 999  00   00611                                                    0            0            0            0            0
1280 001  99   99999 79                                                 0            0            0            0            0
1280 999  00   99999                                                    0            0            0            0            0

TOTAL EMISSIONS FOR COUNTY 1280-                                    10647          140          943         1038        32287
```

(Page 3 of 4)

Figure AST20-2 - continued.  Sample Output

```
RUN DATE 02/01/80                                   COLORADO                                          PAGE   2
                                                 EIS/AREA SOURCE
                                             POLLUTANT SUMMARY REPORT

                                  SUMMARY REPORT FOR THE CRITERIA POLLUTANTS

COUN CATE DIS  GEOGR INFC                               TSP        CO          SO2         NOX         HC
TY   GORY AGGR SUBAL YEAR                               EMISSIONS  EMISSIONS   EMISSIONS   EMISSIONS   EMISSIONS
.........................................................................................................................
2238 023  00   00000 79                                        0          0           0           0           0
2238 047  00   00000 79                                        0          0           0           0           0
2238 060  00   00000 79                                        0          0           0           0           0
2238 999  00   00000                                           4         61           3           8           0

TOTAL EMISSIONS FOR COUNTY 2238-                               0          0           0           0           6

TOTAL EMISSIONS FOR SELECTED RECORDS IN STATE 06           10697        140         943        1038       32287
```

(Page 4 of 4)

Figure AST20-2 - continued. Sample Output

## EIS/AS Test 21 - Ad Hoc

## Produce a Quick Look Pollutant Summary Report for Six Pollutants

In this test run, a pollutant summary report for six pollutants is generated using the cataloged procedure ECRPM40 which executes CRTQLED (EC0160), the quick look edit program; CRTQLEX (EC0170), the quick look extract program; and CRPQUIK (EC0180), the quick look report program.

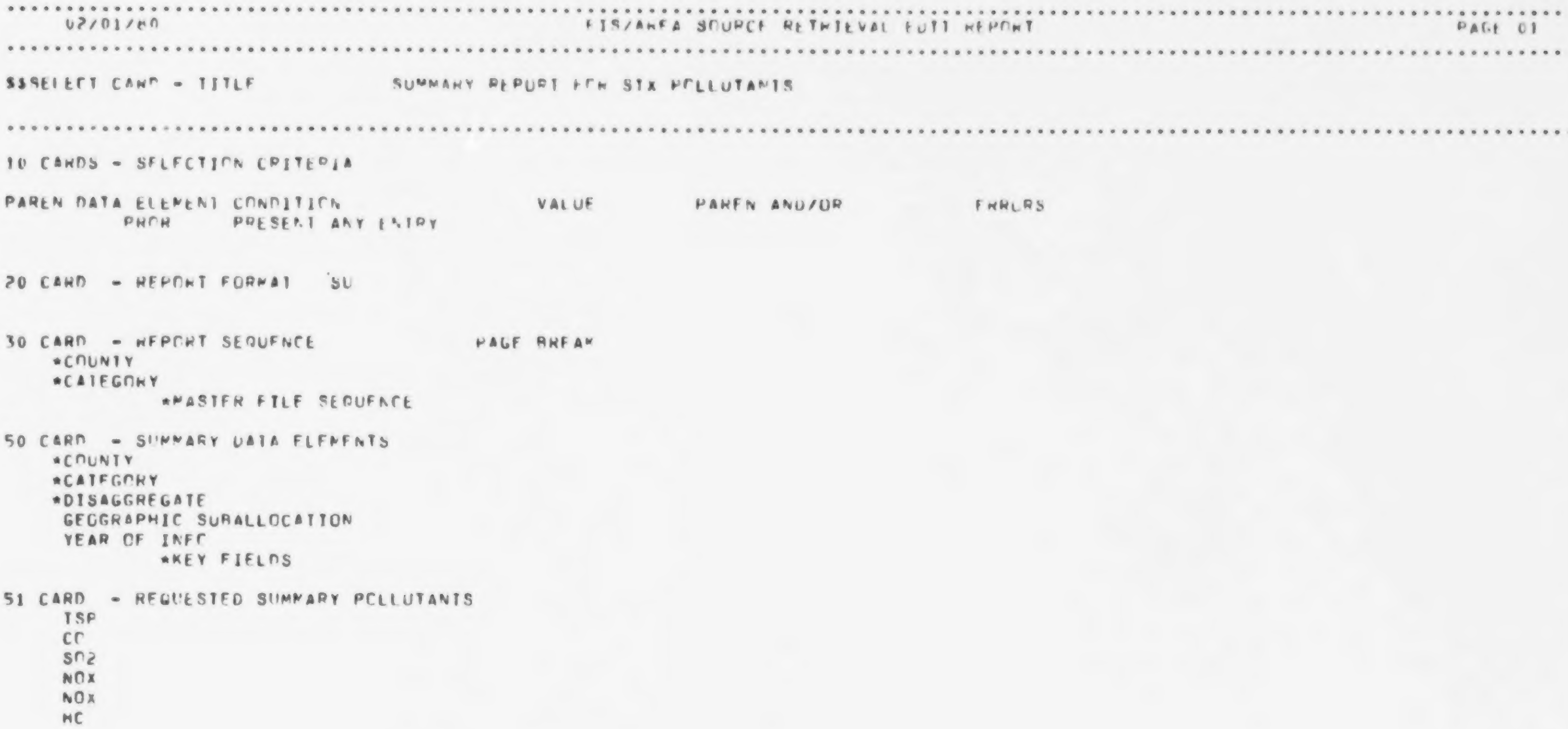
The user-supplied control cards input to CRTQLED (EC0160) are similar to those used in EIS/AS Test 20. The major difference is that a 10-card and a 51-card are supplied along with the 20-card and the 50-card. The 10-card is for selection purposes and the 51-card specifies the six pollutants which are to appear in the report. See EIS/AS Test 18 for further discussion of the quick look package.

The run stream for this test run contains the JCL needed to execute the quick look package. The purpose of this test run is to obtain a summary report of the emissions for the six pollutants: total suspended particulates (11101), carbon monoxide (42101), sulfur dioxide (42401), nitrogen dioxide (42602), oxides of nitrogen (42603), and hydrocarbons (43101). These pollutants are specified through the use of the 51-card. A 10-card specifies that any category record selected for the report must have a non-blank process rate. See EIS/AS Test 20 for further discussion of the quick look pollutant summary report. The run stream for this test run is shown in Figure AST21-1.

A substitutable parameter is used to specify the name of the master file input to CRTQLEX (EC0170). The name of the master file is ECMSTR7 (created in Test 7). The DD (data definition) information for the control cards input to CRTQLED (EC0160) is also supplied. Sample output from this procedure is shown in Figure AST21-2.

```
//ASTEST21 JOB     (ACCOUNTING INFO)
//*
//*    PRODUCE A SUMMARY REPORT FOR USER-SPECIFIED
//*    POLLUTANTS
//*
//TEST21A EXEC ECRPMAU,
//        MSTRFIL=ECMSTR7
//*
//*    SELECT THOSE MASTER RECORDS WHOSE PROCESS RATES
//*    ARE PRESENT;  PRODUCE THE REPORT FOR THE SIX
//*    POLLUTANTS SPECIFIED
//*
//EDIT.INPUT DD *
$$SELECT          SUMMARY REPORT FOR SIX POLLUTANTS                          02/01/80
10   PROR P
20 SU
50 GSUP INYR
51 11101 42101 42401 42602 42603 43101
$$END
```

Figure AST21-1.  Run Stream



```
..........................................................................................................
     02/01/80                                EIS/AREA SOURCE RETRIEVAL EDIT REPORT                                    PAGE 01
..........................................................................................................
$$SELECT CARD - TITLE           SUMMARY REPORT FOR SIX POLLUTANTS

..........................................................................................................
10 CARDS - SELECTION CRITERIA

PAREN DATA ELEMENT CONDITION                VALUE         PAREN AND/OR           ERRORS
           PROR      PRESENT ANY ENTRY


20 CARD  - REPORT FORMAT   'SU


30 CARD  - REPORT SEQUENCE               PAGE BREAK
     *COUNTY
     *CATEGORY
              *MASTER FILE SEQUENCE

50 CARD  - SUMMARY DATA ELEMENTS
     *COUNTY
     *CATEGORY
     *DISAGGREGATE
      GEOGRAPHIC SUBALLOCATION
      YEAR OF INFO
              *KEY FIELDS

51 CARD  - REQUESTED SUMMARY POLLUTANTS
      TSP
      CO
      SO2
      NOx
      NOx
      HC
```

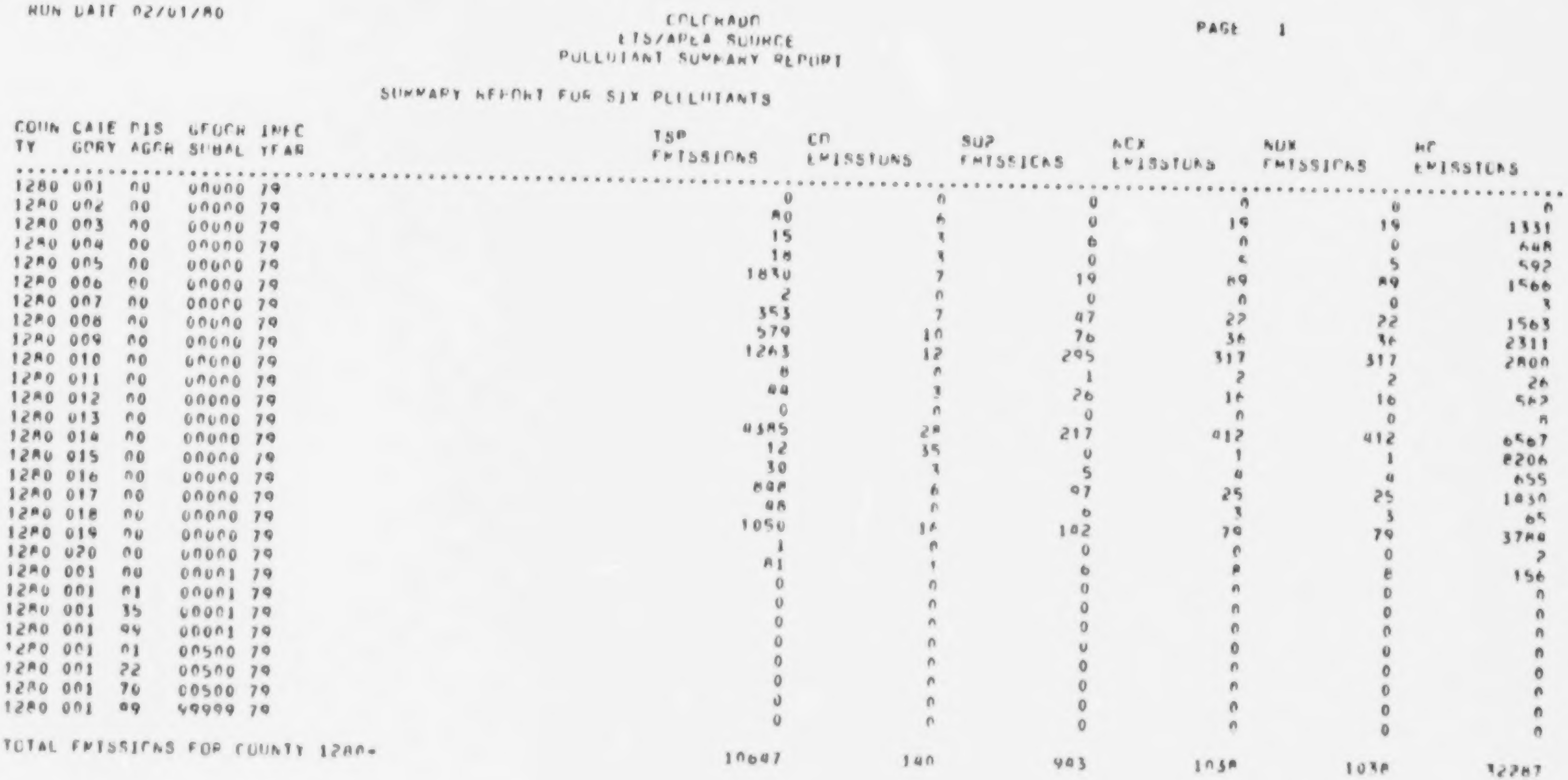
(Page 1 of 4)

Figure AST21-2. Sample Output

```
PROGRAM NAME: CRTWLEX (EC0170)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980

                                                        RETRIEVAL EXTRACT REPORT

     02/01/80                                            ETS-AREA SOURCE

.....................................................................................................

     NUMBER OF RECORDS READ              371
     NUMBER OF RECORDS WRITTEN           195

          CONTINUING WITH RETRIEVAL
```

(Page 2 of 4)

Figure AST21-2 - continued. Sample Output



```
RUN DATE 02/01/80                          COLORADO                              PAGE   1
                                       EIS/AREA SOURCE
                                   POLLUTANT SUMMARY REPORT

                              SUMMARY REPORT FOR SIX POLLUTANTS

COUN CATE DIS  GEOCH INFC                            TSP         CO          SO2         ACX         NOX         HC
TY   GORY AGGR SUBAL YEAR                            EMISSIONS   EMISSIONS   EMISSIONS   EMISSIONS   EMISSIONS   EMISSIONS
.........................................................................................................................
1280 001  00   00000 79                                      0           0           0           0           0           0
1280 002  00   00000 79                                     80           6           0          19          19        1331
1280 003  00   00000 79                                     15           3           6           0           0         648
1280 004  00   00000 79                                     18           3           0           5           5         592
1280 005  00   00000 79                                   1830           7          19          89          89        1566
1280 006  00   00000 79                                      2           0           0           0           0           3
1280 007  00   00000 79                                    353           7          47          22          22        1563
1280 008  00   00000 79                                    579          10          76          36          36        2311
1280 009  00   00000 79                                   1263          12         295         317         317        2800
1280 010  00   00000 79                                      8           0           1           2           2          26
1280 011  00   00000 79                                     44           3          26          16          16         562
1280 012  00   00000 79                                      0           0           0           0           0           8
1280 013  00   00000 79                                   4385          28         217         412         412        6567
1280 014  00   00000 79                                     12          35           0           1           1        8206
1280 015  00   00000 79                                     30           3           5           4           4         655
1280 016  00   00000 79                                    848           6          97          25          25        1830
1280 017  00   00000 79                                     48           0           6           3           3          65
1280 018  00   00000 79                                   1050          16         102          79          79        3788
1280 019  00   00000 79                                      1           0           0           0           0           2
1280 020  00   00000 79                                     81           1           6           8           8         156
1280 001  00   00001 79                                      0           0           0           0           0           0
1280 001  01   00001 79                                      0           0           0           0           0           0
1280 001  35   00001 79                                      0           0           0           0           0           0
1280 001  99   00001 79                                      0           0           0           0           0           0
1280 001  01   00500 79                                      0           0           0           0           0           0
1280 001  22   00500 79                                      0           0           0           0           0           0
1280 001  76   00500 79                                      0           0           0           0           0           0
1280 001  99   99999 79                                      0           0           0           0           0           0

TOTAL EMISSIONS FOR COUNTY 1280-                         10647         140         903        1038        1038       32287
```

(Page 3 of 4)

Figure AST21-2 - continued.  Sample Output

```
RUN DATE 02/01/80                                    COLORADO                                              PAGE   2
                                                 EIS/AREA SOURCE
                                             POLLUTANT SUMMARY REPORT

                                  SUMMARY REPORT FOR SIX POLLUTANTS

COUN CATE DIS  GEOGR INFO                                TSP         CO           SO2          RCX          NOX          HC
TY   GORY AGGR SUBAL YEAR                                EMISSIONS   EMISSIONS    EMISSIONS    EMISSIONS    EMISSIONS    EMISSIONS
**************************************************************************************************************************
223B 023  00   00000 79                                          0            0            0            0            0            0
223B 047  00   00000 79                                          0            0            0            0            0            0

TOTAL EMISSIONS FOR COUNTY 223B-                                 0            0            0            0            0            0


TOTAL EMISSIONS FOR SELECTED RECORDS IN STATE 06             10647          140          983         1038         1036        32287
```

(Page 4 of 4)

Figure AST21-2 - continued. Sample Output

## EIS/AS Test 22 - Ad Hoc

### Execute the Retrieval Package and Produce a Quick Look Report from the Answer File

In this test run, the retrieval package is executed using the cataloged procedure ECRTM30 which executes CRTLNGP (EC0090), the retrieval language processor program; the COBOL compiler; the linkage editor; and CRTGENR (EC0100), the generated retrieval program. A quick look report is produced from the answer file using the cataloged procedure ECRPM40 which executes CRTQLED (EC0160), the quick look edit program; CRTQLEX (EC0170), the quick look extract program; and CRPQUIK (EC0180), the quick look report program.

Two sets of user-supplied control cards are necessary for this test run. The first set consists of EIS/AS retrieval specification cards which are input to CRTLNGP (EC0090). The second set consists of the quick look control cards which are input to CRTQLED (EC0160). See Test 7 for a discussion of the retrieval package and Test 18 for a discussion of the quick look package.

The run stream for this test run contains the JCL needed to execute the retrieval package and the quick look package. The purpose of this test run is to demonstrate the interactive capabilities of the retrieval and quick look packages. In this test, an answer file (a subset of the master file) is produced using the retrieval package. This answer file is used as the input master file for the quick look package which creates a report from a subset of the answer file. The answer file produced by the retrieval package is cataloged for future use. It contains master file description records that have a year of '75' or greater and a blank population field, description records that have blank year and population fields, and all category records that are subordinate to these description records. Comment records are not selected for inclusion in the answer file.

The quick look report produced from the answer file contains only a subset of the answer file records. The data elements listed in the report include the county, the geographic suballocation number, the category number, the category disaggregate number, the year of information, the pollutant ID, and the emission factor and emissions estimate associated with the pollutant. All emissions estimates are totaled. The run stream for this test run is shown in Figure AST22-1.

Substitutable parameters are used when executing the procedure ECRTM30 to supply the names of the master file input to CRTGENR (EC0100) and the answer file output from CRTGENR (EC0100). The names of these files are ECMSTR7 (created in Test 9) and ECANSR5, respectively. A substitutable parameter is also used to override the disposition of the answer file. The overriding disposition is 'NEW,CATLG,DELETE'.

A substitutable parameter is used when executing the procedure ECRPM40 to supply the name of the master file input to CRTQLEX (EC0170). The name of the file is ECANSR5, the answer file output from CRTGENR (EC0100).

The DD (data definition) information for the retrieval specification cards input to CRTLNGP (EC0090) and the quick look control cards input to CRTQLED (EC0160) is also supplied. Sample output from this test run is shown in Figure AST22-2.

The same quick look report could be produced without the use of the retrieval package, but there would be no answer file to retain for future use. The quick look package produces a temporary file which contains only key information and the data extracted for the report. This temporary file is deleted at the end of the run.

There may be other reasons that require the user to incorporate the retrieval and quick look packages. Suppose the user wishes to produce a quick look report, but the selection criteria involves more than twenty 10-cards which is the maximum for a given report. In most cases, the selection criteria can be divided into subsets. The most comprehensive subset(s) can then be used with the retrieval package to produce an answer file. This answer file can then be input to the quick look package along with the remaining selection criteria to produce the desired report. For example, suppose the selection criteria for a quick look report were as follows:

```
 1.    10   STTE B                        OR
 2.    10 ( YEAR E 75                     AND
 3.    10   CATN G 005                    AND
 4.    10   CATN L 037                    AND
 5.    10   INYR G 78                     AND
 6.    10   PLTC E 11101                  AND
 7.    10   EEST G 0000001              ) OR
 8.    10 ( YEAR E 77                     AND
 9.    10   CATN G 005                    AND
10.    10   CATN L 037                    AND
11.    10   INYR G 78                     AND
12.    10   PLTC E 11101                  AND
13.    10   EEST G 0000001              ) OR
14.    10 ( YEAR B                        AND
15.    10   POPN B                        AND
16.    10   RPPC B                        AND
17.    10   CATN G 005                    AND
18.    10   CATN L 037                    AND
19.    10   INYR G 78                     AND
20.    10   PLTC E 11101                  AND
21.    10   EEST G 0000001              )
```

Execution of the quick look package would be terminated since there are twenty-one 10-cards. The first 10-card specifies that a record is to be selected if the state field is blank, but this will never occur since the state field is part of the key information and will always contain a value. This card is necessary only because the first 10-card should not contain parentheses.

The problem can be solved by dividing the selection criteria into subsets. Since lines 3 through 7, 9 through 13, and 17 through 21 are identical, they can form a subset. These data elements are associated with category records. The remaining data elements (YEAR, POPN, and RPPC) are associated with description records. Since category records are subordinate to description records, the data elements YEAR, POPN, and RPPC will be the comprehensive subset. The retrieval request cards derived from this subset are as follows:

```
$$SELECT            0 1
YEAR                         = '75'                   OR
YEAR                         = '77'                   OR
(YEAR                        = '  '                   AND
POPULATION                   = '         '            AND
RURAL-POPULATION-PERCENT     = '  '
$$END
```

The number of quick look control cards is reduced significantly. They are as follows:

```
$$SELECT
10   CATN G 005                    AND
10   CATN L 037                    AND
10   INYR G 78                     AND
10   PLTC E 11101                  AND
10   EEST G 0000001
20 QL
.
.
.
$$END
```

Hence, the problem is solved and the user has the option of retaining the answer file created from the retrieval procedure.

```
//ASTEST22 JOB     (ACCOUNTING INFO)
//*
//*    RETRIEVE RECORDS FROM THE MASTER FILE AND
//*    PRODUCE A QUICK LOOK REPORT FROM THE ANSWER FILE
//*
//TEST22A EXEC ECRTM30,
//        MSTRFIL=FCMSTR7,
//        ANSRFIL=FCANSR5,
//        DISP='NEW,CATLG,DELETE'
//*
//*    SELECT THE DESCRIPTION AND CATEGORY RECORDS FOR WHICH
//*    THE YEAR IS NOT LESS THAN 1975 OR NOT GIVEN AND FOR
//*    WHICH NO POPULATION FIGURE IS GIVEN
//*
//GENER.INPUT DD *
$$SELECT1       R 1
(YEAR                          N < '75'                          OR
YEAR                             = '  ')                         AND
POPULATION                       = '        '
$$END
//TEST22B EXEC ECRPR40,
//        MSTRFIL=FCANSR5
//*
//*    PRODUCE A QUICK LOOK REPORT FROM THE ANSWER FILE IN STEP A1
//*    REPORT ON TSP EMISSIONS FOR SPECIFIC CATEGORIES FOR 1978 ON
//*
//FUT1.INPUT DD *
$$SELECT   TSP EMISSIONS IN CATEGORIES 5-37 FROM 1978 TO PRESENT        02/01/80
10   CATN G 005             AND
10   CATN L 037             AND
10   INYR G 76              AND
10   PLTC E 11101
20 WL
40 GSUB  CATN  DISA  INYR  PLTC  EFAC  EESTX
$$END
```

Figure AST22-1. Run Stream

```
                FIS/AS RETRIEVAL LANGUAGE PROCESSOR PROGRAM - DIAGNOSTIC REPORT                              PAGE     1

PROGRAM NAME: CNTLNGP (EF0090)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980

INPUT (CONTROL CARDS):
$$SELECT       0 1
(YEAR                         N < '75'                          OR
YEAR                            = '  ')                         AND
POPULATION                      = '        ,
$$END

NUMBER OF CONTROL CARDS READ:                    5
NUMBER OF RETRIEVAL SELECTION RECORDS READ:    837
NUMBER OF RETRIEVAL SOURCE RECORDS WRITTEN:    916
NUMBER OF CONDITIONAL MESSAGES:                  0
NUMBER OF ABORT MESSAGES:                        0

- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

                FIS/AS GENERATED RETRIEVAL PROGRAM - DIAGNOSTIC REPORT                                       PAGE     1

PROGRAM NAME: CNTGENR (EF0100)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980

NUMBER OF MASTER FILE RECORDS READ:         371
NUMBER OF MASTER FILE RECORDS WRITTEN:      308
NUMBER OF CONDITIONAL MESSAGES:               0
NUMBER OF ABORT MESSAGES:                     0
```

(Page 1 of 4)

Figure AST22-2. Sample Output

```
*********************************************************************************************************************************
     02/01/80                                    EIS/AREA SOURCE RETRIEVAL (Q11) REPORT                                  PAGE 01
*********************************************************************************************************************************

$$SELECT CARD - TITLE       TOP EMISSIONS IN CATEGORIES 5-37 FROM 1978 TO PRESENT

*********************************************************************************************************************************

10 CARDS - SELECTION CRITERIA

PAREN DATA ELEMENT CONDITION                   VALUE          PAREN AND/OR           ERRORS
           CATN      GREATER THAN OR EQUAL TO  005                      AND
           CATN      LESS THAN OR EQUAL TO     037                      AND
           INYR      GREATER THAN OR EQUAL TO  78                       AND
           PLTC      EQUAL TO                  11101


20 CARD  - REPORT FORMAT    W1


30 CARD  - REPORT SEQUENCE           PAGE BREAKS/ SUBTOTALS
     *COUNTY
     *CATEGORY
           *MASTER FILE SEQUENCE

40 CARD  - QUICK  LOOK  DATA  ELEMENTS
TOTAL
          *COUNTY (KEY DATA ELEMENT, ALWAYS PRESENT)
           GEOGRAPHIC SUBALLOCATION
           CATEGORY NUMBER
           CATEGORY DISAGGREGATE NO.
           YEAR OF INFO
           POLLUTANT ID - CATEGORY REC
           EMISSION FACTOR
  X        EMISSIONS ESTIMATES
```

(Page 2 of 4)

Figure AST22-2 - continued.  Sample Output

```
PROGRAM NAME: CRTRIEX (EFU170)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980
                                                          RETRIEVAL EXTRACT REPORT

    02/01/80                                               EIS-AREA SOURCE
...................................................................................................

    NUMBER OF RECORDS READ             308
    NUMBER OF RECORDS WRITTEN           17

         CONTINUING WITH RETRIEVAL
```

(Page 3 of 4)

Figure AST22-2 - continued. Sample Output

```
RUN DATE 02/01/80                                 COLORADO                                      PAGE   1
                                               EIS/AREA SOURCE
                                              QUICK LOOK REPORT

                          TSP EMISSIONS IN CATEGORIES 5-37 FROM 1978 TO PRESENT

COUN GEOGR CATG DIS- INFO PLT   EMISSION        EMISS
TY   SUBAL NO.  AGGR YEAR CATGY FACTOR          ESTIM
............................................................................................................
1280 00000 005  00   79   11101 0000007.000     0001870
1280 00000 006  00   79   11101 0000002.000     0000002
1280 00000 007  00   79   11101 0000001.000     0000353
1280 00000 008  00   79   11101 0000001.000     0000579
1280 00000 009  00   79   11101 0000001.000     0001263
1280 00000 010  00   79   11101 0000001.000     0000008
1280 00000 011  00   79   11101 0000001.000     0000044
1280 00000 012  00   79   11101 0000001.000     0000000
1280 00000 013  00   79   11101 0000001.000     0004385
1280 00000 014  00   79   11101 0000001.000     0000012
1280 00000 015  00   79   11101 0000001.000     0000030
1280 00000 016  00   79   11101 0000001.000     0000808
1280 00000 017  00   79   11101 0000001.000     0000048
1280 00000 018  00   79   11101 0000001.000     0001050
1280 00000 019  00   79   11101 0000001.000     0000001
1280 00000 020  00   79   11101 0000001.000     0000081
2238 00000 023  00   79   11101 0000008.000     0000000

 GRAND TOTALS
                                                  10534


TOTAL NUMBER OF QUICK LOOK LINES EQUALS     17
```

(Page 4 of 4)

Figure AST22-2 - continued. Sample Output

## EIS/AS Test 23 - Ad Hoc

### Execute the Retrieval Package and Produce a Batched Answer File and a Detailed Report of the File

In this test run, a batch retrieval is executed using the cataloged procedure ECRTM30 which executes CRTLNGP (EC0090), the retrieval language processor program; the COBOL compiler; the linkage editor; and CRTGENR (EC0100), the generated retrieval program. The answer file output from CRTGENR (EC0100) is sorted using the cataloged procedure ECSRM10 which executes CSRMSTR (EC0110), the master file sort program. A detailed list of the sorted file output from CSRMSTR (EC0110) is produced using the cataloged procedure ECRPM20 which executes CRPMSTR (EC0130), the master file detailed report program.

The user-supplied retrieval request cards input to CRTLNGP (EC0090) are divided into groups which are called batches. Each batch is separated from the preceding batch by a $$SELECT card and is supplied with a sequence number by CRTLNGP (EC0090). When CRTGENR (EC0100) selects a master file record, this sequence number is inserted in the record to indicate the batch in which the record qualifies. The input master file records are compared with each batch of retrieval criteria, therefore a record may be selected more than once. The resulting answer file is sorted into batch number sequence by CSRMSTR (EC0110). The user must supply an option card to CSRMSTR (EC0110) specifying that a BATCH sort is to be performed. The sorted answer file is printed in a detailed report by CRPMSTR (EC0130). The batch number will appear in the upper right corner of each page of the detailed report. The report may not be in master file sequence since the input answer file is sorted in batch number sequence. An option card is supplied as input to CRPMSTR (EC0130) to indicate the maximum number of printed lines per page in the detailed report. Test 7 provides a discussion of the retrieval package and CRPMSTR (EC0130); Test 10 contains a discussion of CSRMSTR (EC0110).

The run stream for this test run contains the JCL needed to execute the retrieval package, the master file sort program, and the master file detailed report program. There are three batches designated in the retrieval request cards. The first $$SELECT card specifies that both description and category records are to be retrieved. Information contained on any succeeding $$SELECT card will be ignored. The run stream for this test run is shown in Figure AST23-1.

Substitutable parameters are used when executing the procedure ECRTM30 to supply the names of the master file input to CRTGENR (EC0100) and the answer file output from CRTGENR (EC0100). The names of these files are ECMSTR7 (created in Test 9) and ECANSR6, respectively.

Substitutable parameters are used when executing the procedure ECSRM10 to supply the names of the master file input to CSRMSTR (EC0110) and the sorted master file output from CSRMSTR (EC0110). The names of these files are ECANSR6 and ECANSR7, respectively.

A substitutable parameter is used when executing ECRPM20 to supply the name of the master file input to CRPMSTR (EC0130). The name of this file is ECANSR7.

The DD (data definition) information for the retrieval specification cards input to CRTLNGP (EC0090), the option card input to CSRMSTR (EC0110), and the option card input to CRPMSTR (EC0130) is also supplied. Sample output from this test run is shown in Figure AST23-2.

```
//ASTEST23 JOB     (ACCOUNTING INFO)
//*
//*   PERFORM A BATCH RETRIEVAL AND PRODUCE A
//*   DETAILED REPORT FROM THE SORTED ANSWER FILE
//*
//TEST23A EXEC ECRTR30,
//        MSTRFIL=FCMSTR7,
//        ANSRFIL=FCANSR6
//*
//*   RETRIEVE THREE BATCHES OF RECORDS BASED ON THE
//*   FOLLOWING COUNTY AND SUBALLOCATION RESTRICTIONS:
//*   (1)  A POSITIVE RURAL POPULATION PERCENTAGE LESS
//*         THAN 40 % WITH A TOTAL POPULATION LESS THAN
//*         50,000
//*   (2)  A RURAL POPULATION PERCENTAGE GREATER THAN
//*         40% WITH A NON-BLANK POPULATION FIGURE
//*   (3)  A TOTAL POPULATION GREATER THAN 100,000
//*
//GENER.INPUT DD *
$$SELECT       0 1
RURAL-POPULATION-PERCENT           > '00'                                  AND
RURAL-POPULATION-PERCENT           < '40'                                  AND
POPULATION                         < '00050000'
$$SELECT
RURAL-POPULATION-PERCENT           > '40'                                  AND
POPULATION                       N = '        '
$$SELECT
POPULATION                         > '00100000'
$$END
//TEST23B EXEC ECSRM10,
//        OLDMSTR=FCANSR6,
//        NEWMSTR=FCANSR7
//*
//*   SORT THE ANSWER FILE FROM STEP A USING THE
//*   BATCH OPTION
//*
//SORT.OPTIONS DD *
BATCH
//TEST23C EXEC ECRPR20,
//        MSTRFIL=FCANSR7
//*
//*   PRODUCE A DETAILED REPORT OF THE SORTED
//*   ANSWER FILE FROM STEP B
//*
//LIST.OPTIONS DD *
60
```

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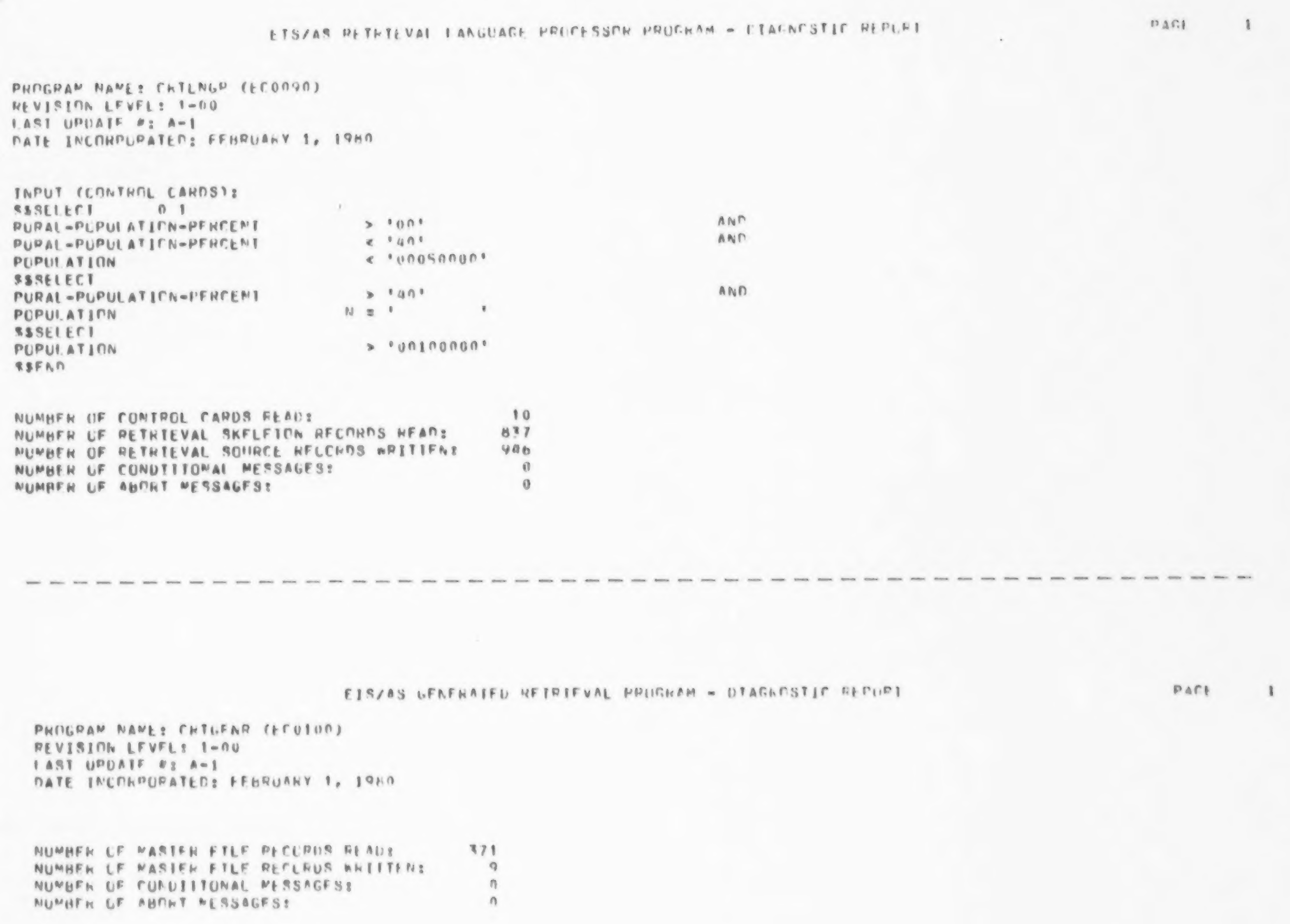
Figure AST23-1. Run Stream



```
                     EIS/AS RETRIEVAL LANGUAGE PROCESSOR PROGRAM - DIAGNOSTIC REPORT                    PAGE     1

PROGRAM NAME: CRTLNGP (EC0090)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980

INPUT (CONTROL CARDS):
$$SELECT       0 1
RURAL-POPULATION-PERCENT          > '00'                              AND
RURAL-POPULATION-PERCENT          < '40'                              AND
POPULATION                        < '00050000'
$$SELECT
RURAL-POPULATION-PERCENT          > '40'                              AND
POPULATION                      N = '        '
$$SELECT
POPULATION                        > '00100000'
$$END

NUMBER OF CONTROL CARDS READ:                   10
NUMBER OF RETRIEVAL SKELETON RECORDS READ:     837
NUMBER OF RETRIEVAL SOURCE RECORDS WRITTEN:    986
NUMBER OF CONDITIONAL MESSAGES:                  0
NUMBER OF ABORT MESSAGES:                        0


 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -


                     EIS/AS GENERATED RETRIEVAL PROGRAM - DIAGNOSTIC REPORT                             PAGE     1
 PROGRAM NAME: CRTGENR (EC0100)
 REVISION LEVEL: 1-00
 LAST UPDATE #: A-1
 DATE INCORPORATED: FEBRUARY 1, 1980


 NUMBER OF MASTER FILE RECORDS READ:       371
 NUMBER OF MASTER FILE RECORDS WRITTEN:      9
 NUMBER OF CONDITIONAL MESSAGES:             0
 NUMBER OF ABORT MESSAGES:                   0
```

(Page 1 of 3)

Figure AST23-2. Sample Output

```
                                   EIS/AS MASTER FILE SORT PROGRAM  -  DIAGNOSTIC REPORT                              PAGE

PROGRAM NAME: CSMASTR (EC0110)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980

SORT OPTION SPECIFIED: BATCH


NUMBER OF RECORDS READ:                 9
NUMBER OF RECORDS WRITTEN:              9
NUMBER OF DIAGNOSTIC MESSAGES:          0
```

```
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
```

```
                                       AREA SOURCE MASTER FILE DETAIL LIST PROGRAM
                                                    DIAGNOSTIC REPORT                                            PAGE

PROGRAM NAME: CHPMSTR (EC0130)
REVISION LEVEL:  1-00
LAST UPDATE #:  A-1
DATE INCORPORATED: FEBRUARY 1, 1980

OPTION IN EFFECT: 60 LINES PER PAGE MAXIMUM

NUMBER OF RECORDS READ:                    9
NUMBER OF DESCRIPTION RECORDS:             9
NUMBER OF CATEGORY RECORDS:                0
NUMBER OF COMMENT RECORDS:                 0
```

(Page 2 of 3)

Figure AST23-2 - continued.  Sample Output

```
                                          AREA SOURCE MASTER FILE DETAIL LIST PROGRAM
                                                         FILE LISTING                                                      PAGE     1

***************
**DESCRIPTION**   STATE   COUNTY   AQCR   AQCR NAME                                             PLANT ID   GEOG SUB #   SMSA   BATCH
***************   ------------------------------------------------------------------------------------------------------------------
                    14     7840     074                                                           1120       00000       4213    0

  RECORD    CATEGORY    CATEGORY     ATM     DEFINED    AREA                      MAJOR                 SUBALLOCATION TECHNIQUE
   TYPE      NUMBER     DISAG #     BASIS   AREA CODE   NAME                      ACTIVITY                  CODE   DESCRIPTION
  ------------------------------------------------------------------------------------------------------------------------------
   CG         000          00        013                SMITH COUNTY              INDUSTRY

  DATE     SIP BASE     PROJ'D     SOURCE          LENGTH              PCF       POPULATION           NUMBER UTM      NUMBER OF
 YR/DAY      YEAR        YEAR       TYPE        AREA    UNITS CD      CODE    PUR %        TOTAL     COORDINATES     POLLUTANTS
 -----------------------------------------------------------------------------------------------------------------------------
 80/004       78          82                 12,345.55     54          6       23                        4               5

                                                          UTM  COORDINATES
  01  HORIZ      VERT      02  HORIZ      VERT      03  HORIZ     VERT      04  HORIZ     VERT      05  HORIZ     VERT      06  HORIZ     VERT
  ---------------          ---------------          ---------------------    ---------------------    ---------------------    ---------------------
                                                     01  123.4  5123.4        56  788.8  5120.5        12  345.7  8965.4        12  223.5  5632.2

        SULFUR  CONTENTS             ASH  CONTENTS             GAS FUEL              DIESEL FUEL                 MOTOR   VEHICLE   MILES
 ANTH    BITUM    DIST    RESD'L     ANTH    BITUM             VEHICLES               VEHICLES   LIMITED ACCESS   RURAL     SUB  URBAN     URBAN
 COAL    COAL     OIL     OIL        COAL    COAL          LIGHT       HEAVY           HEAVY          ROADS       ROADS       ROADS        ROADS
 ---------------------------------   --------------     ----------------------      -----------   ------------------------------------------------
 0.6     3.8      0.3     1.1        9.3     9.3           5,671        810             826                       3,098                    5,303

  FLAG     EIS   FLAGS                          SIP ESTIMATES
 NEDS A1   1 2 3 4 5 6          TSP        SO2        NOX        HC          CO
 -------   -----------     ------------------------------------------------------
    S      S S S S S S          197          3         10         15          55

       ***    POLLUTANT                     ATTAINMENT   AQMA     EIS    ***    POLLUTANT                   ATTAINMENT   AQMA     EIS    ***
       ***    ID       NAME                   STATUS     NUMBER   F 7    ***    ID       NAME                 STATUS     NUMBER   F 7    ***
       ---------------------------------------------------------------------------------------------------------------------------------------
       ***    42101    CO                       A        00023     S     ***    42401    SULFUR DIOXIDE          U                  S     ***
       ***    43101    HYDROCARBONS             U                  S     ***    11101    TSP-1                   U        000123    S     ***
       ***    42602    NITROGEN OXIDES          U                  S     ***
```

(Page 3 of 3)

Figure AST23-2 - continued. Sample Output

## EIS/AS Test 24 - Ad Hoc

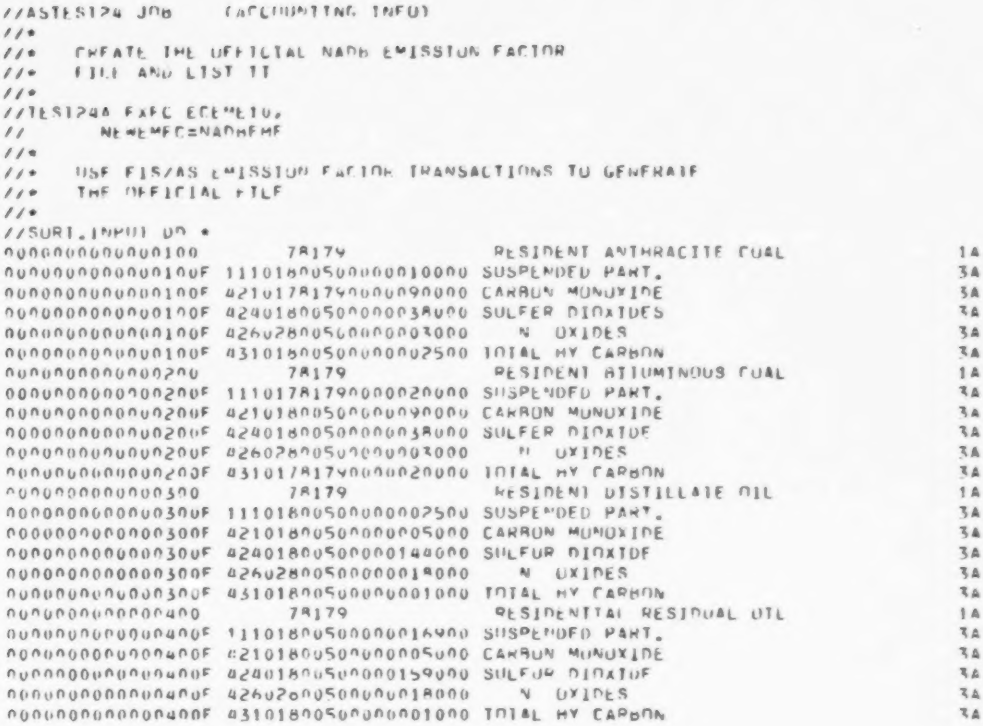
## Create the Official NADB Emission Factor File and Produce a Detailed Report

In this test run, the official NADB area source emission factor file is created from EIS/AS emission factor file transactions using the cataloged procedure ECEME10. This procedure executes CSREFTR (EC0010), the emission factor file transaction sort program; and CEMEFAC (EC0020), the emission factor file edit-maintenance program. The file output from CEMEFAC (EC0020) is listed in a detailed report using the cataloged procedure ECRPE10 which executes CRPEFAC (EC0150), the emission factor file detailed report program.

The transactions input to CSREFTR (EC0010) must be in EIS/AS emission factor file transaction format. An option card must be supplied as input to CEMEFAC (EC0020) specifying a control date, a warning message option (optional), and a list option (optional). Also, a dummy file must be specified as input to CEMEFAC (EC0020) since this is a file creation run. See EIS/AS Test 1 for a discussion of CSREFTR (EC0010), CEMEFAC (EC0020), and CRPEFAC (EC0150).

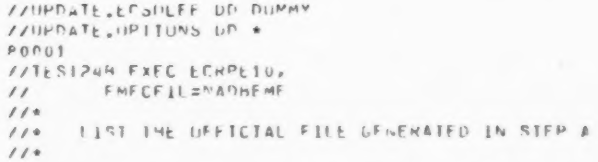
The run stream for this test run contains the JCL needed to execute the emission factor file maintenance and detailed report procedures. The purpose of this test run is to create the official NADB emission factor file which will be used in live runs of the EIS/AS system. It is suggested that the user keep a backup of this file in the event that the original file is inadvertently deleted. The run stream for this test run is shown in Figure AST24-1.

Substitutable parameters are used to supply the name of the emission factor file output from CEMEFAC (EC0020) and input to CRPEFAC (EC0150). The name of this file is NADBEMF. The DD (data definition) information for the transactions input to CSREFTR (EC0010) and the option card input to CEMEFAC (EC0020) is also supplied. Sample output from this test run is shown in Figure AST24-2.



```
//ASTEST24 JOB    (ACCOUNTING INFO)
//*
//*   CREATE THE OFFICIAL NADB EMISSION FACTOR
//*   FILE AND LIST IT
//*
//TEST24A EXEC ECEMEIO,
//       NEWEMFC=NADBEMF
//*
//*   USE FIS/AS EMISSION FACTOR TRANSACTIONS TO GENERATE
//*   THE OFFICIAL FILE
//*
//SORT.INPUT DD *
0000000000000100        78179                RESIDENT ANTHRACITE COAL                 1A
0000000000000100F 11101800500000010000 SUSPENDED PART.                                3A
0000000000000100F 42101781790000090000 CARBON MONOXIDE                                3A
0000000000000100F 42401800500000038000 SULFER DIOXIDES                                3A
0000000000000100F 42602800500000003000    N  OXIDES                                   3A
0000000000000100F 43101800500000002500 TOTAL HY CARBON                                3A
0000000000000200        78179                RESIDENT BITUMINOUS COAL                 1A
0000000000000200F 11101781790000020000 SUSPENDED PART.                                3A
0000000000000200F 42101800500000090000 CARBON MONOXIDE                                3A
0000000000000200F 42401800500000038000 SULFER DIOXIDE                                 3A
0000000000000200F 42602800500000003000    N  OXIDES                                   3A
0000000000000200F 43101781790000020000 TOTAL HY CARBON                                3A
0000000000000300        78179                RESIDENT DISTILLATE OIL                  1A
0000000000000300F 11101800500000002500 SUSPENDED PART.                                3A
0000000000000300F 42101800500000005000 CARBON MONOXIDE                                3A
0000000000000300F 42401800500000144000 SULFUR DIOXIDE                                 3A
0000000000000300F 42602800500000018000    N  OXIDES                                   3A
0000000000000300F 43101800500000001000 TOTAL HY CARBON                                3A
0000000000000400        78179                RESIDENTIAL RESIDUAL OIL                 1A
0000000000000400F 11101800500000016900 SUSPENDED PART.                                3A
0000000000000400F 42101800500000005000 CARBON MONOXIDE                                3A
0000000000000400F 42401800500000159000 SULFUR DIOXIDE                                 3A
0000000000000400F 42602800500000018000    N  OXIDES                                   3A
0000000000000400F 43101800500000001000 TOTAL HY CARBON                                3A
```

(Remainder of transactions omitted)



```
//UPDATE.ECSOLEF DD DUMMY
//UPDATE.OPTIONS DD *
P0001
//TEST24B EXEC ECRPEIO,
//       EMFCFIL=NADBEMF
//*
//*   LIST THE OFFICIAL FILE GENERATED IN STEP A
//*
```

Figure AST24-1. Run Stream

```
                    EIS/AS EMISSION FACTOR FILE TRANSACTION SORT PROGRAM  -  DIAGNOSTIC REPORT                    PAGE     1

PROGRAM NAME: CSREFTR (EC0010)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980

NUMBER OF INPUT TRANSACTIONS:                                          384
NUMBER OF OUTPUT TRANSACTIONS:                                         385

 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

                    EIS/AS EMISSION FACTOR FILE EDIT-MAINTENANCE PROGRAM  -  DIAGNOSTIC REPORT                    PAGE     1
PROGRAM NAME: CEMEFAC (EC0020)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980

OPTION CARD

   CONTROL DATE IS 80001,  ERROR OPTION IS NOFLAGW,  LIST OPTION IS NOLIST


NUMBER OF TRANSACTIONS READ:                                           385
NUMBER OF ERRORS DETECTED:                                               0
NUMBER OF WARNINGS DETECTED:                                             0
NUMBER OF TRANSACTIONS REJECTED:                                         0
NUMBER OF EMISSION FACTOR FILE RECORDS READ:                             0
NUMBER OF EMISSION FACTOR FILE RECORDS WRITTEN:                        385
```

(Page 1 of 3)

Figure AST24-2. Sample Output

```
              EIS/AS EMISSION FACTOR FILE DETAILED REPORT PROGRAM  -  DIAGNOSTIC REPORT                  PAGE      1

PROGRAM NAME: CHPEFAC (EC0150)
REVISION LEVEL: 1-00
LAST UPDATE #: A-1
DATE INCORPORATED: FEBRUARY 1, 1980


EMISSION FACTOR FILE RECORD COUNT:        385
NUMBER OF CATEGORIES IN LIST:              64
NUMBER OF POLLUTANT ENTRIES IN LIST:      320
   FEDERAL POLLUTANT ENTRIES:             320
   STATE POLLUTANT ENTRIES:                 0
   LOCAL POLLUTANT ENTRIES:                 0
NUMBER OF ERRORS:                           0
NUMBER OF PAGES IN REPORT:                 11
```

(Page 2 of 3)

Figure AST24-2 - continued. Sample Output

```
                                           EIS/AS EMISSION FACTOR FILE DETAILED REPORT                          PAGE      1

STATE    COUNTY                          SUBALLOC    DISAG       CATEGORY                                CAT DATE     FLAGS/CONTENTS %'S
         CODE  NAME                      NUMBER        #      NUMBER      DESCRIPTION                    YY  DDD    NIT      SUL      ASH
---------------------------------------------------------------------------------------------------------------------------------------------

                                          EMF DATE        POLLUTANT                                          EMISSION     CONF        POLLUTANT
                                           YY  DDD       ID         NAME               ORIG    SOURCE        FACTOR      LEVEL       SPEC DATA
                                         -----------------------------------------------------------------------------------------------------

 00      0000                            00000        00        001     RESIDENT ANTHRACITE COAL     78  179
                                            80  050      11101      SUSPENDED PART.    FEDERAL                  10.000        0
                                            78  179      42101      CARBON MONOXIDE    FEDERAL                  90.000        0
                                            80  050      42401      SULFER DIOXIDES    FEDERAL                  38.000        0
                                            80  050      42602         N  OXIDES       FEDERAL                   3.000        0
                                            80  050      43101      TOTAL HY CARBON    FEDERAL                   2.500        0

 00      0000                            00000        00        002     RESIDENT BITUMINOUS COAL     78  179
                                            78  179      11101      SUSPENDED PART.    FEDERAL                  20.000        0
                                            80  050      42101      CARBON MONOXIDE    FEDERAL                  90.000        0
                                            80  050      42401      SULFER DIOXIDE     FEDERAL                  38.000        0
                                            80  050      42602         N  OXIDES       FEDERAL                   3.000        0
                                            78  179      43101      TOTAL HY CARBON    FEDERAL                  20.000        0

 00      0000                            00000        00        003     RESIDENT DISTILLATE OIL      78  179
                                            80  050      11101      SUSPENDED PART.    FEDERAL                   2.500        0
                                            80  050      42101      CARBON MONOXIDE    FEDERAL                   5.000        0
                                            80  050      42401      SULFUR DIOXIDE     FEDERAL                 144.000        0
                                            80  050      42602         N  OXIDES       FEDERAL                  18.000        0
                                            80  050      43101      TOTAL HY CARBON    FEDERAL                   1.000        0

 00      0000                            00000        00        004     RESIDENTIAL RESIDUAL OIL     78  179
                                            80  050      11101      SUSPENDED PART.    FEDERAL                  16.900        0
                                            80  050      42101      CARBON MONOXIDE    FEDERAL                   5.000        0
                                            80  050      42401      SULFUR DIOXIDE     FEDERAL                 159.000        0
                                            80  050      42602         N  OXIDES       FEDERAL                  18.000        0
                                            80  050      43101      TOTAL HY CARBON    FEDERAL                   1.000        0

 00      0000                            00000        00        005     RESIDENTIAL NATURAL GAS      78  179
                                            78  179      11101      SUSPENDED PART.    FEDERAL                  10.000        0
                                            80  050      42101      CARBON MONOXIDE    FEDERAL                  20.000        0
                                            80  050      42401      SULFUR DIOXIDE     FEDERAL                   0.600        0
                                            80  050      42602         N  OXIDES       FEDERAL                  80.000        0
                                            80  050      43101      TOTAL HY CARBON    FEDERAL                   8.000        0

 00      0000                            00000        00        006     RESIDENTIAL WOOD             78  179
                                            78  179      11101      SUSPENDED PART.    FEDERAL                  25.000        0
                                            80  050      42101      CARBON MONOXIDE    FEDERAL                 150.000        0
                                            80  050      42401      SULFUR DIOXIDE     FEDERAL                   0.500        0
                                            80  050      42602         N  OXIDES       FEDERAL                   1.000        0
                                            80  050      43101      TOTAL HY CARBON    FEDERAL                   6.000        0
```

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Figure AST24-2 - continued. Sample Output

# APPENDIX A

## CROSS-REFERENCE OF TESTS, PROCEDURES, AND PROGRAMS

| Test | Procedures | Programs |
|---|---|---|
| 1 | ECEME10 | CSREFTR (EC0010) |
| | | CEMEFAC (EC0020) |
| | ECRPE10 | CRPEFAC (EC0150) |
| 2 | ECFMM20 | CCENETR (EC0030) |
| | | CSRINTR (EC0050) |
| | | CMSEFIN (EC0060) |
| | | CFMMSTR (EC0070) |
| 3 | ECEMM10 | CEDMSTR (EC0040) |
| | | CSRINTR (EC0050) |
| | | CMSEFIN (EC0060) |
| | | CFMMSTR (EC0070) |
| 4 | ECRPM30 | CRPDUMP (EC0140) |
| 5 | ECEDT10 | CEDMSTR (EC0040) |
| | ECMST10 | CSRINTR (EC0050) |
| | | CMSEFIN (EC0060) |
| | ECFMM10 | CSRINTR (EC0050) |
| | | CFMMSTR (EC0070) |
| 6 | ECRPM10 | CRPASNA (EC0120) |
| 7 | ECRTM30 | CRTLNGP (EC0090) |
| | | CRTGENR (EC0100) |
| | ECRPM20 | CRPMSTR (EC0130) |
| 8 | ECRPM10 | CRPASNA (EC0120) |

| Test | Procedures | Programs |
|---|---|---|
| 9 | ECFMM30 | CMSEFGN (EC0080)<br>CSRINTR (EC0050)<br>CFMMSTR (EC0070) |
| 10 | ECRTM10<br>ECRTM20<br>ECSRM10<br>ECRPM30 | CRTLNGP (EC0090)<br>CRTGENR (EC0100)<br>CSRMSTR (EC0110)<br>CRPDUMP (EC0140) |
| 11 | ECEME10 | CSREFTR (EC0010)<br>CEMEFAC (EC0020) |
| 12 | ECEDT10 | CEDMSTR (EC0040) |
| 13 | ECCET10 | CCENETR (EC0030) |
| 14 | ECMSM10 | CMSEFGN (EC0080) |
| 15 | ECMST10 | CSRINTR (EC0050)<br>CMSEFIN (EC0060) |
| 16 | ECRTM30<br>ECRPM30 | CRTLNGP (EC0090)<br>CRTGENR (EC0100)<br>CRPDUMP (EC0140) |
| 17 | ECRTM30<br>ECRPM20 | CRTLNGP (EC0090)<br>CRTGENR (EC0100)<br>CRPMSTR (EC0130) |
| 18 | ECRPM40 | CRTQLED (EC0160)<br>CRTQLEX (EC0170)<br>CRPQUIK (EC0180) |
| 19 | ECRPM40 | CRTQLED (EC0160)<br>CRTQLEX (EC0170)<br>CRPQUIK (EC0180) |

| Test | Procedures | Programs |
|---|---|---|
| 20 | ECRPM40 | CRTQLED (EC0160)<br>CRTQLEX (EC0170)<br>CRPQUIK (EC0180) |
| 21 | ECRPM40 | CRTQLED (EC0160)<br>CRTQLEX (EC0170)<br>CRPQUIK (EC0180) |
| 22 | ECRTM30 | CRTLNGP (EC0090)<br>CRTGENR (EC0100) |
|  | ECRTM40 | CRTQLED (EC0160)<br>CRTQLEX (EC0170)<br>CRPQUIK (EC0180) |
| 23 | ECRTM30 | CRTLNGP (EC0090)<br>CRTGENR (EC0100) |
|  | ECSRM10 | CSRMSTR (EC0110) |
|  | ECRPM20 | CRPMSTR (EC0130) |
| 24 | ECEME10 | CSREFTR (EC0010)<br>CEMEFAC (EC0020) |
|  | ECRPE10 | CRPEFAC (EC0150) |

| Procedure | EIS/AS Tests |
|---|---|
| ECCET10 | 13 |
| ECEDT10 | 5, 12 |
| ECEME10 | 1, 11, 24 |
| ECEMM10 | 3 |
| ECFMM10 | 5 |
| ECFMM20 | 2 |
| ECFMM30 | 9 |
| ECMSM10 | 14 |
| ECMST10 | 5, 15 |
| ECRPE10 | 1, 24 |
| ECRPM10 | 6, 8 |
| ECRPM20 | 7, 17, 23 |
| ECRPM30 | 4, 10, 16 |
| ECRPM40 | 18, 19, 20, 21, 22 |
| ECRTM10 | 10 |
| ECRTM20 | 10 |
| ECRTM30 | 7, 16, 17, 22, 23 |
| ECSRM10 | 10, 23 |

| Program | EIS/AS Tests |
|---|---|
| CCENETR (EC0030) | 2, 13 |
| CEDMSTR (EC0040) | 3, 5, 12 |
| CEMEFAC (EC0020) | 1, 11, 24 |
| CFMMSTR (EC0070) | 2, 3, 5, 9 |
| CMSEFGN (EC0080) | 9, 14 |
| CMSEFIN (EC0060) | 2, 3, 5, 15 |
| CRPASNA (EC0120) | 6, 8 |
| CRPDUMP (EC0140) | 4, 10, 16 |
| CRPEFAC (EC0150) | 1, 24 |
| CRPMSTR (EC0130) | 7, 17, 23 |
| CRPQUIK (EC0180) | 18, 19, 20, 21, 22 |
| CRTGENR (EC0100) | 7, 10, 16, 17, 22, 23 |
| CRTLNGP (EC0090) | 7, 10, 16, 17, 22, 23 |
| CRTQLED (EC0160) | 18, 19, 20, 21, 22 |
| CRTQLEX (EC0170) | 18, 19, 20, 21, 22 |
| CSREFTR (EC0010) | 1, 11, 24 |
| CSRINTR (EC0050) | 2, 3, 5, 9, 15 |
| CSRMSTR (EC0110) | 10, 23 |